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Key to the genera of galerucine beetles of New Guinea, with a review of *Sastra* and related new taxa (Chrysomelidae)

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Synopsis

A key is given to the 47 genera of the chrysomelid subfamily Galerucinae represented in New Guinea. The current status of the 34 species previously listed in the genus *Sastra* Baly is reviewed; 22 new combinations are proposed and four combinations are reinstated. Three genera, 14 species and two subspecies are described as new. One specific synonym is newly established, and one species is recalled from synonymy. Two of the genera have been erected primarily for the inclusion of the New Guinean species with toothed pronota which were previously assigned to the genus *Sastra*. Keys, figures of the diagnostic features and distribution maps are provided.

Introduction

The Chrysomelidae is one of the largest coleopterous families with upwards of 50,000 described species distributed throughout the world. The adults and larvae are entirely phytophagous, therefore the family is one of the most economically important amongst the Coleoptera. The majority of species tend to be host-specific or are restricted to one particular plant family although, compared with the number of species in the family, relatively few of the host plants have been recognised.

The genera dealt with in this paper belong to the Galerucinae, which is the largest of the 17 subfamilies recognised in the Chrysomelidae (for key, see Gressitt & Kimoto 1963) and has over 5,000 described species distributed throughout the world; these are most abundant in tropical regions. Adult Galerucinae feed on the parenchyma of the leaves and many species are known to visit flowers (Knuth, 1908; Maulik, MS.). The larvae may be either leaf- or root-feeders. In the majority of species pupation takes place in the soil but in others the pupae are attached to leaves.

As a result of making routine identifications of Galerucinae from New Guinea it became

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apparent that many of the genera occurring in this region are inaccurately and poorly defined in the literature. This has resulted in new species being assigned to the wrong genera, and genera being placed in the wrong tribe. Diagnosis of genera which are widespread in Asia and occur in New Guinea are provided by Gressitt & Kimoto (1963), while Gressitt & Hornabrook (1977) give a key to the principal beetle families represented in New Guinea. The latter work includes a section on the Galerucinae, with a list of the principal genera found in New Guinea. However, many problems remain in identifying Galerucinae from this region. The present work aims to rectify the most serious omission by providing a comprehensive key to the New Guinean genera of the subfamily. Wherever possible this key is based on type-species and takes into account undescribed species and genera as well as those already described. Several genera not previously recorded from this region are included.

In the present study special attention has been paid to *Sastra* which was found to constitute a particularly heterogeneous assemblage of species; of the 35 species listed by Wilcox (1971) only nine are now retained in this genus. The type-material of these nine species is listed and a redefinition of *Sastra* is provided. All nine species are from New Guinea, and a study of further undescribed species indicates that the geographical range of this genus is confined to this region (Map 1). Eleven species from New Guinea, previously assigned to *Sastra*, were found to constitute two new genera which are described here; these are principally characterised by having a tooth-like process on the lateral margin of the pronotum. The largest of the two genera, *Polysastra*, has been erected primarily for the inclusion of nine of the above mentioned species, but I have examined a further 43 undescribed species. A full revision of these is not included in the present paper but 16 are described below as representatives of the 'species groups' (see discussion under *Polysastra*) into which the genus has been divided. It is hoped that this preliminary study will facilitate further research by future workers.

A third new genus from New Guinea has also been described here as the species it contains are frequently incorrectly assigned to *Sastra*. This genus is also interesting as it exhibits characters uncommon in the Galerucinae. All genera, groups and species have been dealt with in alphabetical order. Genitalia and other diagnostic features are illustrated for as many species as possible.

Depositories

AMNH	American Museum of Natural History, New York, U.S.A.
ANIC	Australian National Insect Collection, Division of Entomology, CSIRO, Canberra, Australia.
BMNH	British Museum (Natural History), London, U.K.
BPBM	Bernice P. Bishop Museum, Honolulu, Hawaii, U.S.A.
DPI	Department of Primary Industry, Konedobu, Papua New Guinea.
IP	Institut für Pflanzenschutzforschung, Eberswalde, D.D.R.
ITZ	Institut voor Taxonomische Zoölogie, Zoölogisch Museum, Amsterdam, Netherlands.
MCSN	Museo Civico di Storia Naturale, Genoa, Italy.
MCZ	Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.
MIZSU	Museo ed Istituto di Zoologia Sistematica dell' Università, Turin, Italy.
MNHN	Muséum National d'Histoire Naturelle, Paris, France.
MNHU	Museum für Naturkunde der Humbolt-Universität, Berlin, D.D.R.
NMV	National Museum of Victoria, Melbourne, Victoria, Australia.
NR	Naturhistoriska Riksmuseet, Stockholm, Sweden.
OIP	Ohlmus collection, Department of Primary Industry, Konedobu, Papua New Guinea.
RHN	Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands.
RWH	R. W. Hornabrook collection, Wellington, New Zealand.
SAM	South Australian Museum, Adelaide, Australia.
SMT	Staatliches Museum für Tierkunde, Dresden, D.D.R.
USNM	National Museum of Natural History, Washington, D.C., U.S.A.
UQ	University of Queensland, St Lucia, Queensland, Australia.

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Key to genera of Galerucinae from New Guinea

1 At least three-quarters of length of antennal socket behind mid-line of eye. Length of frons from anterior margins of antennal sockets to base of labrum not less than that of socket.
Tarsal claws appendiculate. Frons never forming a transverse ridge 2

– At least three-quarters of length of antennal socket in front of mid-line of eye. Length of frons from anterior margins of antennal sockets to base of labrum not more than that of a socket 14

2 (1) Pronotum with distinct dorsal depressions. Apex of tibiae with or without a ventral spur 3

– Pronotum without dorsal depressions. Apex of tibiae with a ventral spur 6

3 (2) Length of gena at narrowest point less than half that of eye. Apex of tibiae with a ventral spur. Basal segment of antenna distinctly longer than third segment. Elytron becoming broader in apical half. Basal segment of hind tarsus equal to or longer than rest of segments combined 4

– Length of gena at narrowest point clearly exceeding half that of eye. Apex of tibiae without a ventral spur. Basal segment of antenna only slightly longer than third segment. Elytra parallel-sided. Basal segment of hind tarsus not longer than segments 2 and 3 combined .... ***COLEOCRANIA*** Jacoby

4 (3) Distance between antennal sockets at least half width of socket. Basal segment of antenna equal to or shorter than segments 2 and 3 combined. Length of frons from anterior margins of antennal sockets to base of labrum not greater than 2·5× that of a socket 5

– Distance between antennal sockets less than half width of socket. Basal segment of antenna at least 1·5× as long as segments 2 and 3 combined. Length of frons from anterior margins of antennal sockets to base of labrum at least 3·0× that of a socket. ***LUPERUS*** Müller

5 (4) Body length not exceeding 10 mm. Basal segment of hind tarsus 1·5× as long as rest of segments combined. Eye at least 4·0× the length of an antennal socket. Antennal segments slender and individually straight. Pronotum not more than 1·4× broader than long, posterior half with shallow sublateral depressions which are sometimes confluent, forming a single transverse depression. Elytron not more than 3·5× length of pronotum. .... ***NEOLEPTA*** Jacoby

– Body length at least 15 mm. Basal segment of hind tarsus shorter than rest of segments combined. Eye not more than 3·0× length of an antennal socket. Antennal segments slender, segments 4–11 individually curved. Pronotum not less than 1·9× broader than long. Elytron at least 5·0× length of pronotum (unevenly convex). ***PALAEOSASTRA*** Jacoby

6 (2) Basal segment of antenna distinctly shorter than segments 2 and 3 combined, third segment 4·5× as long as second, segments 3–8 individually curved. Pronotum not more than 1·7× broader than long. Elytra subparallel-sided. Body length not exceeding 7·0 mm .... ***ALOPENA*** Baly

– Basal segment of antenna as long as or longer than segments 2 and 3 combined. Other characters not so combined 7

7 (6) Lateral margin of pronotum with a small rounded tooth at about middle. Length of frons from anterior margins of antennal sockets to base of labrum at least 2·5× length of socket. Basal segment of antenna at least twice as long as frons. Elytron *c.* 4·0× length of pronotum. Antenna and legs slender. Basal segment of hind tarsus slightly longer than segments 2 and 3 combined. Dorsum appearing glabrous... ***ASTRIDELLA*** Laboissière

– Lateral margins of pronotum without a median tooth. Other characters not so combined 8

8 (7) Length from hind margin of antennal sockets to hind margin of eyes not more than 0·25× length of socket. Length of frons from anterior margins of antennal sockets to base of labrum 2·5–3·0× that of socket.. 11

– Length from hind margin of antennal sockets to hind margin of eyes at least 0·75× that of socket. Length of frons from anterior margins of antennal sockets to base of labrum not more than 2·25× that of socket.. 9

9 (8) Frons with a longitudinal median carina. Length of gena at narrowest point more than half that of antennal socket. Apex of tibiae without a ventral spur. Basal segment of hind tarsus shorter than segments 2 and 3 combined........................... ***YULENIA*** Jacoby

– Frons without a longitudinal median carina. Length of genat at narrowest point distinctly less than half that of antennal socket. Apex of tibiae with a ventral spur. Basal segment of hind tarsus longer than segments 2 and 3 combined 10

10 (9) Outer margin of antennal socket contiguous with inner margin of eye, eye large, width greater than that of area between eyes. Distance between antennal sockets not more than half width of socket. Length of third antennal segment equal to or shorter than second. Pronotum widest at middle, sides evenly rounded. Elytra parallel-sided and evenly convex. Basal segment of hind tarsus as long as rest of segments combined ***NEODRANA*** Jacoby

– Outer margin of antennal socket separated from inner margin of eye by at least half a sockets width. Eye moderately large, width less than that of area between eyes. Distance between antennal sockets more or less equal to width of socket. Length of third antennal segment 1·5–2·0× that of second. Pronotum widest in anterior half, width decreasing gradually towards base. Elytra subparallel-sided, greatest convexity of elytron about middle. Basal segment of hind tarsus 1·25× length of rest of segments combined.. ***LOMIRANA*** Laboissière

11 (8) Length of gena at narrowest point equal to or exceeding half that of antennal socket....... 12

– Length of gena at narrowest point distinctly less than half that of antennal socket, emargination of gena usually contiguous with anterior margin of eye. Body length not exceeding 7 mm.. 13

12 (11) Body length exceeding 7 mm. Pronotum at least 2·2× broader than long. Width between antennal sockets at least that of socket. Antennal segments 4–11 individually curved ***PRASYPTERA*** Baly

– Body length not exceeding 7 mm. Pronotum not more than 1·4× broader than long. Distance between antennal sockets not more than half width of socket. Antennal segments not curved .... ***LUPERUS*** Müller

13 (11) Apical segment of maxillary palp stout, shorter than preceding segment. Frons with a small median longitudinal carina. Third antennal segment equal in length to second, fourth segment at least 4·5× length of third. Pronotum not less than 1·4× broader than long. Basal segment of hind tarsus longer than rest of segments combined ***NEODRANA*** Jacoby

– Apical segment of maxillary palp slender, longer than preceding segment. Frons without median carina. Third antennal segment at least 3× as long as second, fourth segment 1·25× length of third. Pronotum not more than 1·2× broader than long. Basal segment of hind tarsus shorter than rest of segments combined........ ***MICROLEPTA*** Jacoby

14 (1) Lateral margins of pronotum with a distinct, acute or rounded tooth-like projection at about middle. Third antennal segment distinctly longer than fourth. Fore coxal cavities open behind. Tarsal claws bifid. Primary setal pores usually tuberculate......................... 53

– Lateral margins of pronotum never with a distinct median projection 15

15 (14) Tarsal claws bifid 16

– Tarsal claws appendiculate.. 39

16 (15) Width of elytral epipleuron at level of mid coxa 2·0–3·0× greater than at level of hind coxa, epipleuron becoming obsolete or distinctly narrower around level of hind coxa.

Elytron sometimes expanded laterally beyond epipleura. Pronotum with or without dorsal depressions 17

– Width of elytral epipleuron at level of mid coxa never more than 1·5× greater than at level of hind coxa, width of epipleuron either remaining more or less the same for at least three-quarters of its length or becoming gradually narrower from around hind coxa towards apices. Elytron not expanded laterally beyond epipleura. Pronotum with one or more dorsal depressions 28

17 (16) Elytron distinctly costate. Pronotum transverse, greatest width equal to that of elytra at humeral angles. Fore coxal cavities closed behind. Legs stout. Basal segment of hind tarsus shorter than segments 2 and 3 combined. Dorsum setose .... ***PLERONEXIS*** Weise

– Elytron not costate. Other characters not so combined 18

18 (17) Pronotum without doral depressions. Dorsum appearing glabrous 19

– Pronotum with one or more dorsal depressions. Dorsum glabrous or setose 22

19 (18) Elytra broadly ovate. Elytron often expanded laterally beyond epipleura. Pronotum at least 2·0× broader than long 20

– Elytra subparallel-sided. Elytron not expanded laterally beyond epipleura. Pronotum never more than 1·7× broader than long .... ***NOTONICEA*** Hincks ♂

20 (19) Apical segment of maxillary palp globose, almost entirely contained within preceding segment, apex concave. Metasternum with a large anterior peg-like process projecting forward between mid coxae. Expanded area of elytron not more than 1·2× wider than epipleuron. Legs and antennal segments stout. Elytra often banded or bicoloured ***ANOIDES*** Weise

– Apical segment of maxillary palp conical or subglobose, not more than half length of segment contained within preceding segment. Other above characters not so combined 21

21 (20) Metasternum with a large anterior peg-like process projecting forward between mid-coxae. Elytron strongly convex, expanded area lateral to epipleura at least 1·5–2·0× wider than epipleura .... ***PARANOIDES*** Vachon

– Metasternum without anterior peg-like process, Elytron moderately convex, expanded area lateral to epipleura not more than 1·2× wider than epipleura...... ***MOROKASIA*** Jacoby

22 (18) Elytra distinctly setose. Apex of tibiae without a ventral spur. Dorsum usually unicolorous, rarely metallic 23

– Elytra glabrous. Apex of tibiae with or without a ventral spur. Dorsum usually with transverse bands or patches, sometimes partially or entirely metallic 24

23 (22) Head with vertex strongly convex, appearing glabrous and impunctuate. Pronotum at least 2·5× broader than long, maximum width less than that of elytra at humeri, surface with deep transverse sublateral depressions and shallow median depression, sparsely setose. Body length not usually exceeding 7 mm. Legs and antennal segments slender .... ***BUPHONIDA*** Baly

– Head without vertex convex, densely setose and punctured throughout. Pronotum not more than 1·9× broader than long, maximum width equal to that of elytra at humeri, surface densely setose with two more or less circular sublateral depressions in anterior half, median area convex. Body length usually exceeding 10 mm. Legs and antennal segments stout .... ***MENIPPUS*** Clark

24 (22) Elytra broadly ovate, elytron expanded laterally beyond epipleuron. Pronotum with two small more or less circular sublateral depressions or a single, narrow transverse depression in anterior half .... ***OIDES*** Weber

– Elytra not broadly ovate or elytron expanded laterally. Pronotum with sublateral depressions which are either confluent or occupy almost two-thirds of the surface area 25

25 (24) Frons triangular, anterior third either depressed or declivous. Inter-antennal area with a longitudinal median carina. Pronotum narrowing at level of dorsal depressions, depressions narrow, often confluent, anterior third strongly convex. Elytra often pyriform 27

– Frons forming a more or less evenly convex ridge. Inter-antennal area without a median carina. Pronotum not becoming narrower at level of dorsal depressions, depressions broad, occupying almost two thirds of the surface area, anterior half convex at sides. Elytra never pyriform 26

26 (25) Apical segment of maxillary palp subglobose. Male with a deep triangular emargination at apex of abdomen; female with a small curved or triangular notch (may be obscured

by setae). Pronotal depressions present in both sexes .... ***GALERUMAEA*** Hincks

– Apical segment of maxillary palp conical. Male with a shallow curved emargination at apex of abdomen; female with apex evenly rounded. Male with pronotal depressions absent or very weak .... ***NOTONICEA*** Hincks

27 (25) Apex of tibiae with a ventral spur (may be small or obscured by setae). Posterior two-thirds of elytron distinctly convex, humeral area delimited by a distinct transverse depression .... ***PAPUANIA*** Jacoby

– Apex of tibiae without a ventral spur. Posterior two-thirds of elytron not distinctly convex, humeral area never delimited by a transverse depression ***AULACOPHORA*** Chevrolat

28 (16) Length of gena at narrowest point at least 0·67× that of antennal socket 29

– Length of gena at narrowest point less than 0·5× that of antennal socket (emargination of gena usually contiguous with anterior margins of eye (Fig. 15) 33

29 (28) Elytra strongly rugose throughout, rugosities often forming long irregular carinae. Males of some species with a large tooth on hind femur.

Eyes prominent. Frons triangular with a median longitudinal carina. Pronotum with distinct lateral margins, dorsal depressions narrow. Legs and antennal segments slender. (Figs 114, 115).. genus **A**

– Elytra not rugose or carinate. Hind femur never toothed in male 30

30 (29) Apex of tibiae with a ventral spur. Elytra pyriform, posterior two-thirds of elytron distinctly convex, humeral area often delimited posteriorly by a narrow transverse depression. Lateral margins of pronotum distinct. Third antennal segment shorter than fourth. Dorsum appearing glabrous .... ***PAPUANIA*** Jacoby

– Apex of tibiae without a ventral spur. Elytra parallel-sided to subovate, posterior two-thirds of elytron not distinctly convex, humeral area never delimited by a transverse depression. Lateral margins of pronotum absent or barely discernible. Third antennal segment longer than fourth. Dorsum setose or glabrous.................... 31

31 (30) Dorsum appearing glabrous. Puncturation indistinct on head and pronotum. Elytra distinctly and evenly punctured, often metallic, sometimes bicoloured or banded ***MOMAEA*** Baly

– Dorsum distinctly setose. Puncturation strong and dense on head and pronotum. Elytra strongly and densely punctured 32

32 (31) Frons medially convex with a strong anterior declivity. Eye at least three times as long as the narrowest part of gena. Elytra parallel-sided, usually bi-coloured. Basal segment of hind tarsus equal in length to that of segments 2 and 3 combined .... ***ATYSA*** Baly

– Frons with sides convex, no anterior declivity. Eye not more than one and a half times as long as the narrowest part of the gena. Elytron becoming gradually wider from base of humeri onwards. Basal segment of hind tarsus shorter than segments 2 and 3 combined.. ***GALERUCELLA*** Crotch

33 (28) Frons with a median triangular depression, sides distinctly convex. Apical segment of maxillary palp conical, longer than preceding segment. Eye large and prominent, at least 3× length of an antennal segment. Antennal segments slender, third segment at least one and a half times longer than fourth segment. Pronotum transverse, sublateral depressions distinct but often ill-defined. Elytra setose, densely and more or less uniformly punctured throughout, surface evenly convex. Legs slender. Basal segment of hind tarsus 0·5× longer than preceding segment. (Figs 1, 102–112) ***SASTRA*** Baly (p. 247)

– Frons without median depression, being either medially convex or forming a more or less evenly convex ridge. Other characters not so combined................................ 34

34 (33) Elytra densely setose, puncturation distinct and dense 35

– Elytra glabrous or only very sparsely setose, puncturation fine 37

35 (34) Anterior third of pronotum strongly convex across entire width, median region of convex area narrower than rest, convex area distinctly elevated above posterior two-thirds and less coarsely punctured. Eyes large and protuberant. Frons more or less triangular, often declivous anteriorly. Elytra 3–4× longer than broad, parallel-sided or becoming broader just before apices, some species with narrow longitudinal ribs.. ***DYSIODES*** Weise

– Not as above 36

36 (35) Eye not more than twice the length of an antennal socket. Pronotum without lateral margins, sublateral depression broad but not confluent. Inner ungue of tarsal claws

equal in length to or only slightly shorter than outer ungue. Elytra parallel-sided, some species with narrow longitudinal ribs. Antennal segments enlarged and flattened in some species .... ***ATYSA*** Baly

– Eye at least three times as long as antennal socket. Pronotum with narrow but distinct lateral margins, sublateral depressions confluent, occupying at least two-thirds of surface area. Inner ungue of tarsal claw not more than half length of outer segment. Elytra becoming gradually broader from humeral area onwards. Antennal segments filiform .... ***PONERIDEA*** Weise

37 (34) Frons triangular, sometimes medially convex and declivous, length from anterior margins of antennal sockets to base of labrum usually exceeding that of a socket. Antennal segments 3 and 4 subequal 38

– Frons forming a more or less evenly convex ridge, length from anterior margins of antennal sockets to base of labrum not exceeding that of a socket. Antennal segment three at least 1·4× length of fourth .... ***MOMAEA*** Baly

38 (37) Pronotum not more than 1·4× broader than long, sides subparallel, sublateral depression indistinct, often confluent. Elytra parallel- or subparallel-sided. Antennal segments elongate and slender. Male with basal segment of all tarsi greatly enlarged. Abdomen with two long conical appendages at middle of posterior margin of second segment .... ***HOPLASOMA*** Jacoby

– Pronotum at least 2·0× broader than long, sides rounded, sublateral depressions distinct, rarely confluent. Elytron becoming gradually broader from base of humeral area onwards, apical quarter often broadly rounded. Antennal segments 6–11 short and stout. Male with only basal segment of fore tarsus enlarged. Abdominal appendages absent .... ***PAUMOMUA*** Jacoby

39 (15) Elytron with at least six narrow longitudinal ribs, punctures situated between ribs (maybe weakly indicated) 40

– Elytron without any indication of ribs, puncturation confused 42

40 (39) Apex of tibiae without a ventral spur. Pronotum at least 2·4× broader than long. Distance between antennal sockets greater than width of a socket. Underside densely setose. Legs moderately stout. Basal segment of hind tarsus shorter than segments 2 and 3 combined .... ***PLESISTIA*** Maulik

– Apex of tibiae with a ventral spur. Pronotum not more than 1·5× broader than long. Distance between antennal sockets not more than width of a socket. Underside sparsely setose. Legs slender. Basal segment of hind tarsus longer than segments 2 and 3 combined 41

41 (40) Elytral epipleuron becoming distinctly narrower above level of hind coxa, width then decreasing gradually until epipleuron becomes obsolete prior to apex. Frons never modified in male .... ***LOMIRANA*** Laboissière

– Elytral epipleuron not distinctly narrowed above hind coxa, width decreasing gradually below level of hind coxa, epipleuron continuing to apex. Frons often excavated or modified in male .... ***DIAPHAENIDEA*** Laboissière

42 (39) Apical segment of maxillary palp distinct from preceding segment, being either subglobose or conical. Third segment subcylindrical. Frons never excavated in male 43

– Apical segment of maxillary palp situated in the apex of the inner angle of the preceding segment, third segment greatly enlarged and triangular. Frons excavated in male.

Fore coxal cavities open behind. Distance between antennal sockets greater than width of a socket. Basal segment of antenna longer than segments 2 and 3 combined. Basal segment of hind tarsus longer than rest of segments combined

PALPAENIDEA Laboissière

43 (42) Maximum width of elytral epipleuron at level of metepisternum equal to or exceeding that of metepisternum, epipleuron becoming distinctly narrower at about level of hind coxa. Dorsum appearing glabrous 44

– Maximum width of elytral epipleuron at level of metepisternum not more than half that of metepisternum, epipleuron either abbreviated at about level of mid metasternum or fairly constant in width for entire length. Dorsum with or without setae 49

44 (43) Length of gena at narrowest point distinctly less than half that of antennal socket. Pronotum without dorsal depressions 45

– Length of gena at narrowest point not less than half that of antennal socket. Pronotum with or without dorsal depressions 47

45 (44) Apex of tibiae with a ventral spur. Elytron becoming gradually broader from humeral angles onwards, apical half convex, epipleuron becoming obsolete before apex. Legs slender, hind tibia evenly curved. Basal segment of hind tarsus longer than rest of segments combined 46

– Apex of tibiae without a ventral spur. Elytron ovate, weakly convex, epipleuron distinct to apex. Legs moderately slender, hind tibia straight. Basal segment of hind tarsus shorter than segments 2 and 3 combined .... ***CASSENA*** Weise

46 (45) Pronotum not more than 1·4× broader than long, sublateral depressions weak, sometimes confluent, forming a narrow transverse depression, maximum convexity of pronotum in apical half, posterior margin evenly curved .... ***NEOLEPTA*** Jacoby

– Pronotum at least 1·6× broader than long, dorsal depressions absent, surface evenly convex, posterior margin sinuate at sides. Vertex may be excavated in ♂ ***MONOLEPTA*** Chevrolat

47 (44) Apex of tibiae without a ventral spur. Pronotum without dorsal depressions. Third segment of maxillary palp enlarged, length at least 2·5× that of apical segment. Antennal segments 9–11 distinctly enlarged in ♂ .... ***CNEORANE*** Baly

– Apex of tibiae with a ventral spur (may be small). Pronotum with or without dorsal depressions. Third segment of maxillary palp not obviously enlarged, length not more than 1·5× length of apical segment. Apical segments of antenna not enlarged in ♂ 48

48 (47) Antennal segments stout, third segment 2·0–2·5× length of fourth segment. Pronotum at least 1·7× broader than long, surface with two small more or less circular sublateral depressions. Legs stout. Basal segment of hind tarsus slightly longer than segments 2 and 3 combined .... ***SYNODITA*** Chapuis

– Antennal segments slender, segments 3 and 4 subequal. Pronotum not more than 1·3× broader than long, dorsal depressions absent. Legs slender. Basal segment of hind tarsus longer than rest of segments combined .... ***LOMIRANA*** Laboissière

49 (43) Pronotum evenly convex, dorsal depressions absent. Apical segment of maxillary palp subglobose, apex truncate. Antennal segments short and stout. Dorsum appearing glabrous.

Length of gena at narrowest point not less than half that of antennal socket. Maximum width of elytron in apical third. Puncturation fine. Basal segment of hind tarsus shorter than segments 2 and 3 combined .... ***ASTENA*** Baly

– Pronotum unevenly convex, dorsal depressions distinct. Apical segment of maxillary palp conical. Antennal segments elongate and slender. Dorsum glabrous or setose 50

50 (49) Frons triangular, maximum convexity at middle, longitudinal median carina present. Dorsum appearing glabrous or sparsely setose. Elytron usually pyriform, humeral area delimited by a narrow transverse depression .... ***PARIDEA*** Baly

– Frons forming a transverse ridge, maximum convexity at sides, longitudinal median carina absent. Dorsum densely setose (if glabrous then length not exceeding 6 mm). Elytron never pyriform, humeral area not delimited by a transverse depression 51

51 (50) Head and pronotum appearing impunctate. Elytron finely punctured throughout. Dorsum either glabrous throughout or elytra sparsely setose. Length of eye not more than twice that of an antennal socket. Body length not usually exceeding 5 mm. Hind tibia evenly curved .... ***PHYLLOCLEPTIS*** Weise

– Dorsum distinctly punctured and setose throughout. Length of eye at least 3·0× that of antennal socket. Body length exceeding 6 mm. Hind tibia straight 52

52 (51) Length of gena at narrowest point equal to that of three eye facets combined. Maximum convexity of frons at middle. Distance between antennal sockets not less than width of a socket. Interantennal area with a small pit-like depression. Lateral margins of pronotum barely discernible, sublateral depressions small and shallow, rarely confluent. Elytra usually weakly metallic, punctures contiguous .... ***APOPHYLIA*** Thomson

– Length of gena at narrowest point less than that of two eye facets combined. Maximum convexity of frons at sides. Distance between antennal sockets less than width of a socket. Interantennal area without depression. Lateral margins of pronotum distinct, at least two-thirds of surface area depressed. Elytra non-metallic, punctures separated by at least their own width .... ***PONERIDEA*** Weise

53 (14) Length of eye never more than 2·25× that of an antennal socket or twice the width. Length of gena at narrowest point at least half that of an antennal socket 54

– Length of eye at least 3·0× that of an antennal socket and 2·5–3·0× the width. Length of gena at narrowest point less than half that of an antennal socket. Male with a deep triangular emargination at apex of abdomen 56

54 (53) Antennae less than half the length of body, segments short and stout. Body shape suggestive of *Galeruca* sp. Pronotal primary setal pores not tuberculate. Length of metasternum not more than twice that of intercoxal process of mesosternum. (Fig. 40) genus **B**

– Antennae exceeding half body length, segments elongate and slender. Body elongate, elytra parallel- or subparallel-sided. Pronotal primary setal pores tuberculate. Length of metasternum at least 3·5× that of intercoxal process of mesosternum 55

55 (54) Eye at least three times longer than shortest point of gena. Pronotum indistinctly punctured, submedian lateral tooth small and rounded, anterior third and area between outer margin of sublateral depression and base of tooth equally convex, disc sometimes with a narrow ovate depression which may become confluent with sublateral depressions. Elytra more or less evenly convex, never rugose or carinate, rarely metallic, usually bicoloured or with colour pattern. Basal segment of hind tarsus evenly convex dorsally. (Figs 116–119) .... ***MARMINA*** gen. n. (p. 217)

– Eye not more than twice as long as the shortest point of the gena. Pronotum strongly and distinctly punctured, lateral margin with tooth well developed, surface unevenly convex, sublateral depressions ill-defined, disc strongly convex with a small shallow anterior and posterior depression. Elytra robust, surface rugose and unevenly convex. Basal segment of hind tarsus tectiform .... ***GRONOVIUS*** Jacoby

56 (53) Male. Apex of abdomen emarginate, basal segment of fore or mid tarsi enlarged. Antenna may have enlarged or modified segments 57

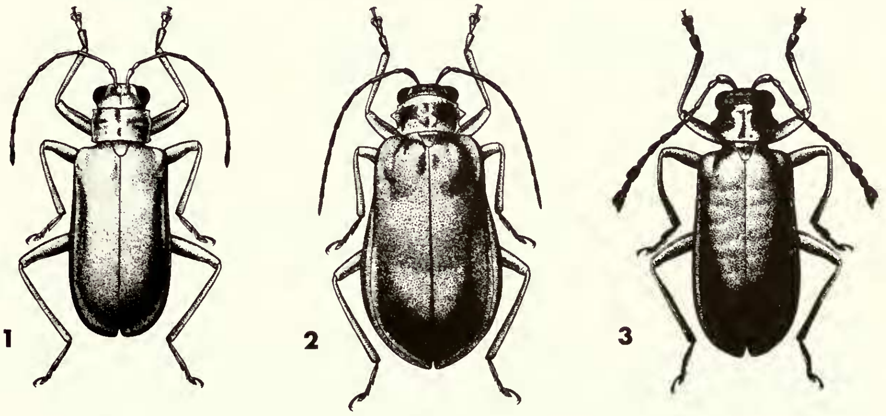
– Female. Apex of abdomen evenly rounded or with small triangular emargination. Basal segment of tarsi not enlarged. Antennal segments filiform, none enlarged or modified 58

57 (56) Antennal segments 4–11 short and stout, segments 9 and 11 distinctly enlarged and ventrally flatterned (Figs 5, 6), these segments glabrous beneath. Mid tibia irregularly curved (Fig. 4). Basal segment of mid tarsus with greater enlargement than fore tarsus (Fig. 12). Elytra more or less evenly convex. (Fig. 3)................. ***DREEUS*** gen. n. (p. 215)

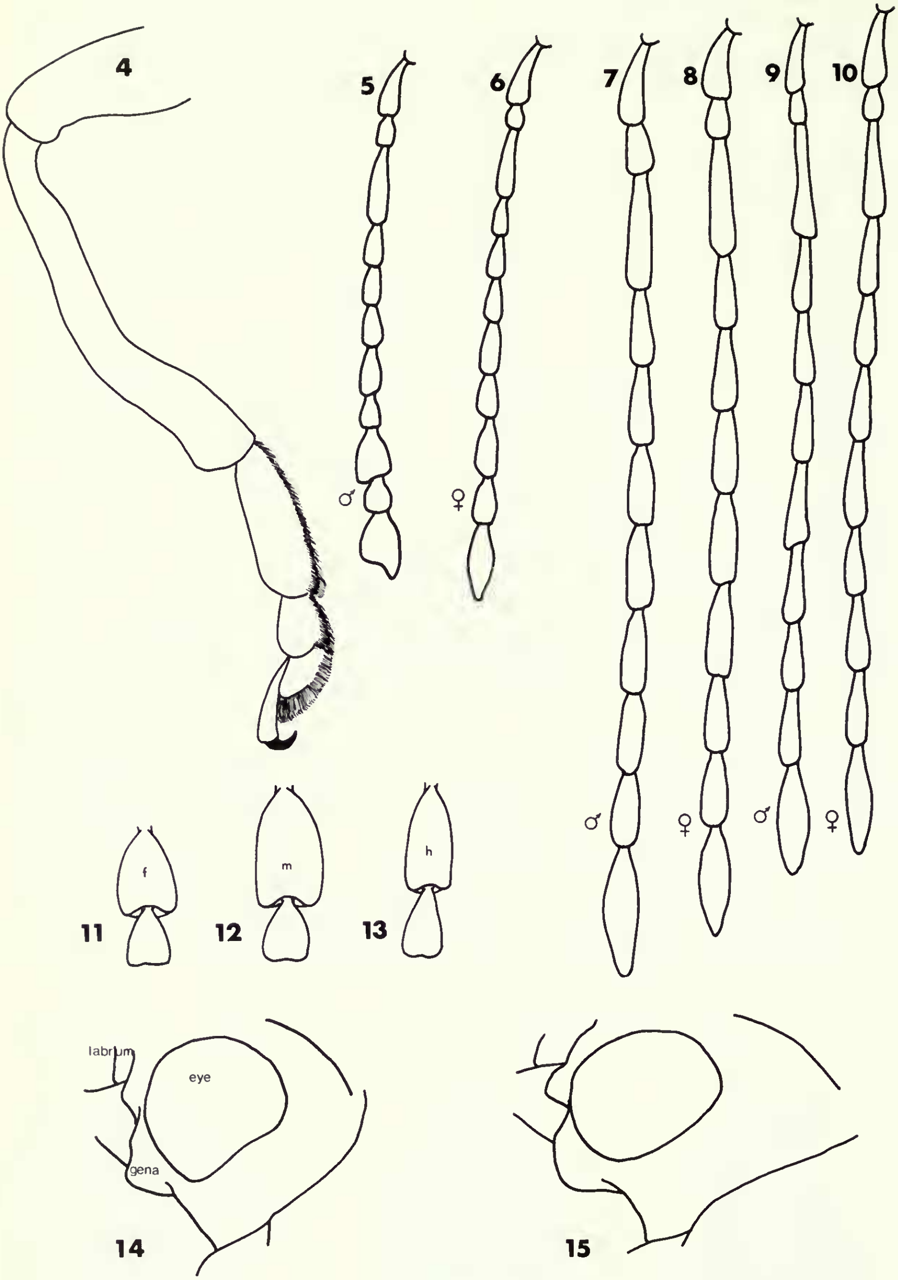
– Antennal segments 4–11 elongate and slender, no modifications present (Figs 7, 8). Basal segment of fore tarsus with greatest enlargement. Elytra with variable facies, sometimes rugose, carinate or evenly convex. (Figs 120–150)***POLYSASTRA*** gen. n. (p. 220)

58 (56) Antennal segments 4–11 stout, segment 11 twice as long as segment 10. Apex of abdomen with a triangular emargination (Fig. 20). Elytron more or less evenly convex. (Fig. 3) .... ***DREEUS*** gen. n. (p. 215)

– Antennal segments 4–11 elongate and slender, segment 11 not more than 1·25× longer than segment 10. Apex of abdomen evenly rounded. Elytra with variable facies, sometimes rugose, carinate or evenly convex. (Figs 120–150)***POLYSASTRA*** gen. n. (p. 220)



Figs 1–3 General habitus of Galerucini genera treated here. 1, *Sastra* sp. ♂. 2, *Polysastra* sp. ♂. 3, *Dreeus* sp. ♂.



Figs 4–15 Distinguishing generic characters. 4, *Dreeus distinctus*, mid tibia of male showing sinuation. 5–10, comparative proportions of antennal segments of (5) *Dreeus* sp. ♂; (6) *Dreeus* sp. ♀; (7) *Polysastra* sp. ♂; (8) *Polysastra* sp. ♀; (9) *Marmina* sp. ♂; (10) *Marmina* sp. ♀. 11–13, *Dreeus* sp., comparative proportions of basal segment of fore, mid and hind tarsi. 14, 15, diagram of head showing comparative emargination of genae of (14) *Polysastra* sp.; (15) *Sastra* sp.

DREEUS gen. n.

Type-species: *Dreeus distinctus* sp. n.

General form. Body elongate, elytra subparallel-sided, appearing glabrous. Combined length of antennal segments slightly less than half that of body, third segment at least 1·5× length of third segment, segments 9 and 10 enlarged and glabrous beneath in male (Figs 5–6). Eyes large and prominent. Pronotum transverse, lateral margins produced into a tooth in anterior half, width at anterior margin less than that of head plus eyes, maximum width more or less equal to that of head plus eyes and slightly less than that of elytra at humeri, disc convex medially, with a small shallow depression anteriorly and posteriorly, and a sublateral depression on either side. Primary setal pores weakly tuberculate. Elytra more or less uniformly convex, usually unicolorous, epipleura becoming obsolete at about apical quarter. Underside setose, fore coxal cavities open behind. Apex of abdomen in male with a triangular emargination which almost reaches hind margin of segment (Fig. 20); female with a small triangular emargination at apex (Fig. 21). Legs slender, mid tibia in male distinctly and irregularly sinuate in basal half (Fig. 4), hind tibia weakly curved, apices in both sexes without ventral spurs or lateral spines. Basal segment of hind tarsus slightly longer than that of segments 2 and 3 combined, basal segment of fore and mid tarsi slightly shorter, basal segment of mid tarsus in male distinctly enlarged, length 1·3× greater than that of basal segment of fore tarsus (Fig. 12). Claws bifid.

Diagnosis. Gena deeply emarginate medially, emargination reaching anterior margin of eye, maximum width of gena less than half that of antennal socket. Apical segment of maxillary palp conical, length more or less equal to that of preceding segment. Labrum small, not obscuring sides of mandibles. Pseudoclypeus distinct, length almost equal to that of labrum. Frons with sides convex, length less than that of antennal socket, sockets separated by less than the width of a socket, anterior margins level with those of eyes. Postantennal swellings convex, distinctly elevated above level of vertex, contiguous with frons between antennal sockets and separated medially by a narrow longitudinal groove which terminates just above median depression of frons. Vertex with irregular puncturation, coronal 'suture' present. Eyes large and prominent, length at least 2·4× that of antennal socket. Proportional lengths of antennal segments similar in both sexes (Figs 5, 6), segments 9 and 11 enlarged in male. Pronotum irregularly punctured, width at lateral tooth on average 1·2× greater than minimum posterior width, tooth usually with apex acute, depressions shallow, median depressions often joined by a narrow longitudinal groove. Scutellum triangular, maximum width more or less equal to length, apex rounded. Elytra almost parallel-sided, average length 3·6× greater than width, maximum width not more than 1·2× greater than width at level of apex of scutellum, posthumeral sublateral depression absent, surface more or less evenly convex, appearing glabrous but minute setae confined within margins of punctures, puncturation irregular. Underside minutely punctured throughout, metasternum convex, 2·8× longer than mesosternum, fore coxal cavities open behind. Legs slender, hind leg 0·7× length of elytron and 1·4× length of fore and mid legs. Length of fore tibia slightly less than that of mid and hind tibiae, male with sinuate mid tibia (Fig. 4) and weakly curved hind tibia. All femora more or less equal in width. Tarsi as in Figs 11–13. Aedeagus forming a chitinous tube with a large complex apical process (Figs 22, 23). Basic structure of female genitalia as in *Polysastra*; the principal differences are a distinct constriction between the vagina and bursa (Fig. 34), distinctly longer styli (Fig. 37), and the proportions of the hemitergites (Figs 34, 37) and ligular largely exposed (Fig. 34).

Distribution. Irian Jaya, Papua New Guinea.

Discussion. Compared with other genera found in this region, this genus is unusual in having both the antennal segments and the mid tibiae modified in the male. It is also unusual amongst the Galerucinae in having the maximum enlargement of the basal tarsal segment in the male on the mid leg, not on the fore leg.

Several New Guinean species referable to this genus have been examined but only one is described here as the others are not represented by sufficient material to make accurate diagnoses. This genus does not appear to be closely related to the other genera from this region, but belongs to the same group of primarily Australasian Galerucini, including *Sastra* and the new genera described here, which are characterised by their elongate form and antennal structure (Figs 1, 2).

Dreeus distinctus sp. n.

(Figs 3, 4–6, 11–13, 20–24, Map 10)

GENERAL FORM. Length 6·9–11·3 mm. Elytra parallel to subparallel-sided, evenly convex, posthumeral, sublateral, longitudinal carinae absent; elytral setae minute, not extending beyond margins of punctures, sometimes a few sparse erect setae on intervals, puncturation confused. Pronotum transverse with a distinct tooth on the lateral margins. Male with antennal segments 9 and 11 enlarged (Fig. 5). Head and pronotum concolorous, dark reddish to pitchy brown. Elytron reddish brown, pitchy brown or dark green with a weak aeneous lustre. Underside and legs in reddish species concolorous, dark testaceous to orange-brown; pitchy brown and green specimens with abdomen pale testaceous and rest of underside dark reddish to pitchy brown. Male with mid femur irregularly curved (Fig. 4), basal segment of fore and mid tarsi enlarged, maximum enlargement in mid tarsi (Fig. 12).

DIAGNOSIS. Head with frons medially depressed, sides convex, elevation more or less equal to that of postantennal swellings; swellings well defined and elevated above level of vertex, derm smooth and shinning with weak microsculpture. Vertex coarsely and irregularly punctured, punctures large, shallow and often confluent, derm distinctly microsculptured, setae long, fine and appressed. Pronotum transverse, male on average 1·6× broader than long, female 1·75× broader than long, development of lateral tooth variable, more acute in small specimens, one side sometimes more developed than the other in male, lateral depressions distinct but shallow, median anterior depression shallow, delimited posteriorly by two small admedian convexities, posterior median depression often ill-defined; puncturation dense and irregular, size and density of punctures variable, size not normally greater than twice that of punctures on humeral area of elytra, width apart not normally exceeding that of a puncture, derm distinctly microsculptured, particularly in median depressions, setae minute, not extending beyond margins of punctures. Scutellum triangular with broadly rounded apex, median area minutely punctured with short, appressed, grey setae, derm microsculptured. Elytron 3·6× longer than broad. Elytra in male more or less parallel-sided, sometimes slightly broader in apical quarter, female subparallel-sided, becoming gradually broader from around middle to a maximum width just anterior to apical quarter. Maximum width *c.* 1·3× greater than the width at the level of the apex of the scutellum, apices evenly rounded in both sexes, derm densely and irregularly punctured throughout giving a slightly rugose appearance, punctures not more than their own width apart, setae minute, not extending beyond the margins of the punctures, epipleura narrow, extending to apex. Underside densely and minutely punctured, metepisternum weakly granulate, punctures not separated by more than their own width, setae short and appressed, sides of metasternum with puncturation and microsculpture as metepisternum, setae slightly longer and finer, median area of metasternum, sparsely punctured, microsculpture composed of irregular, converging, horizontal lines, setae longer and more erect than at sides. Femora with large shallow punctures 1·0–1·5× their own width apart on basal three-quarters, becoming denser at apices, setae short, fine and appressed. Tibiae granulate, setae increasing in density towards apices, short and stout, basal segment of mid tarsus in male 1·5× as long as basal segment of fore tasus. Apex of abdomen incised in both sexes (Figs 20–21). Wing fully developed. Genitalia (Figs 22–24).

Holotype ♂, **Papua New Guinea**: NE, Laiagam, 2180 m, 18–19.vi.1963, m.v. light (*J. Sedlacek*) (BPBM).

Paratypes. **Papua New Guinea**: 25 ♂, 19 ♀, same data as holotype (10 ♂, 6 ♀ BMNH); 7 ♂, 15 ♀, Lake Siruki, 2550 m, 14–17.vi.1965 (3 ♂, 3 ♀ BMNH); 10 ♂, 10 ♀, Kepilam, 2420–2490 m, 20–23.vi.1963, light-trap (all *J. Sedlacek*) (5 ♂, 5 ♀ BMNH); 10 ♀, Kotuni, south slope Mt Otto, 2200 m, 10–15.viii.1959 (5 ♀ BMNH); 1 ♂, Purosa, camp Okapa, 1950 m, 27.ix.1959; 1 ♀, Kimi, Creek Camp, NE. slopes Mt Michael, 1980 m, 29.viii.1959 (all *L. T. Brass*), (AMNH); 2 ♂, Moke, i.x.1957 (*J. Smart*); 1 ♀, 1 ♀, Waisa nr Okapa, *c.* 5000 ft, 15.ii.1965; 1 ♀, Okapa, *c.* 5000 ft, 4–13.ii.1965 (all *M. E. Bacchus*) (BMNH); 1 ♂, 1 ♀, Okapa, Purosa, 1700–2000 m, 18.i.1966; 4 ♂, 3 ♀, 6·4 km W. Wabag, 2020 m, 13.vi.1963 (all *J. Sedlacek*) (1 ♂, 2 ♀ BMNH); 3 ♀, Malgi, Mt Giluwe, 2400 m, 25–30.v.1961, light-trap, heavy rain (*J. L. & M. Gressitt*); 3 ♂, 6 ♀, Dimifa, SE. Mt Giluwe, 2200 m, 9–12.x.1958, light-trap (1 ♂, 2 ♀ BMNH); 3 ♂, 10 ♀, ridge W. of Dimifa, S. Mt Giluwe, 2350 m, 11.x.1958; 1 ♂, SE. slope Mt Giluwe, 2450 m, 12.x.1958; 4 ♂, 4 ♀, Mt Otto, 2200 m, 24.vi.1955 (all *J. L. Gressitt*) (1 ♂, 1 ♀ BMNH); 1 ♂, Yaibos 1650 m, 10–11.vi.1963 (*J. Sedlacek*); 1 ♀, Ahl Valley, Nondugle, 1750 m, 8.vii.1955 (*J. L. Gressitt*); 1 ♀, Korgua, 1450 m, 30.v.1963 (*H.C.*); 1 ♂, Daulo Pass, 2400 m (Asaro Chimbu Div.) 14.vi.1955, light-trap (*J. L. Gressitt*); 11 ♀, Tambul, 2200 m, 26.v.–7.vi.1963, light-trap (*J. Sedlacek*) (5 ♀ BMNH); 1 ♂, 25,600, Moke, 6400 ft, m.v. light, 17.iv.1962; 1 ♂, 1 ♀, 19,025, 19,026, Aiyura, 1959 (*J. H. Barrett*) (DPI); 1 ♀, Wau Creek, Wau, 1200–1500 m, 16–18.ix.1964 (*M. Sedlacek*); 1 ♂, Mt Michael, Lufa, 10.iii.1974 (*R.*

Hornabrook); 1 ♀ Samedata, 17.iii.1974, at light; 1 ♀, W. Highlands, Kandep, 25.iii.1971 (*R. Hornabrook*) (all specimens BPBM unless otherwise stated).

COMMENTS. This species appears to be fairly common throughout the central region of NE. Papua New Guinea. Apart from colour variation there appears to be a certain amount of inter-population variation. It is possible that more than one species may have been included here, although no specific differences could be found in the genitalia of these forms.

MARMINA gen. n.

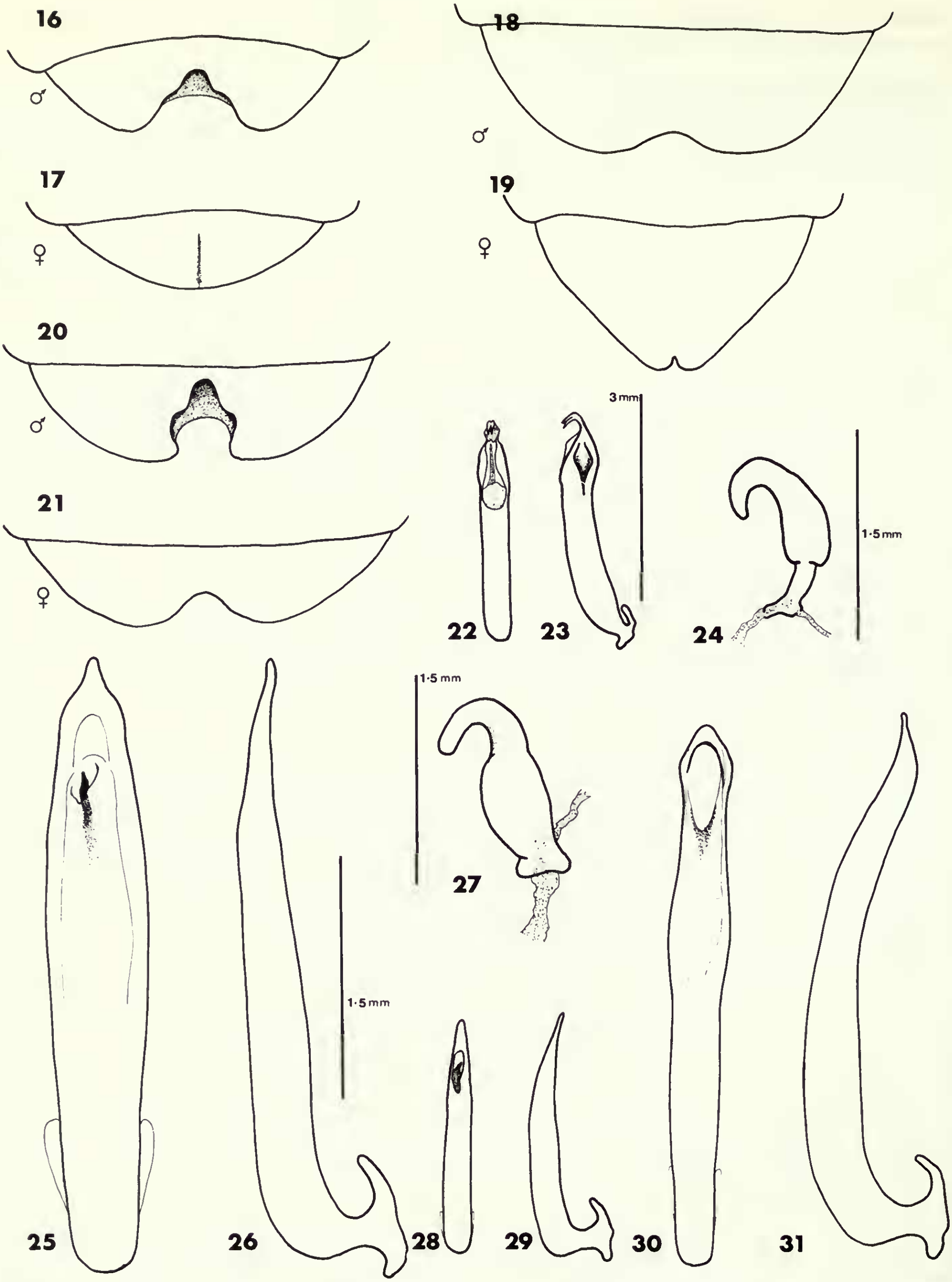
Type-species: *Sastra quadripustulata* Jacoby.

GENERAL FORM. Body elongate, elytra subparallel-sided to subovate. Dorsum appearing glabrous. Length of antenna just exceeding 0·5× that of body, third segment at least 1·3× length of fourth segment and 1·8× length of second. Eyes not protuberant. Pronotum transverse, lateral margins with a small rounded tooth just above midline, width at anterior margin equal to or just exceeding that of head plus eyes, maximum width not greater than that of elytra at humeri. Primary setal pores distinctly tuberculate; pronotal depressions occupying at least two-thirds of surface area, sublateral depression transverse, often confluent with ovate depression on disc. Elytra unicolorous, bicoloured or patterned. Epipleura present to apical quarter, broad in basal half then narrowing towards apices from around level of hind coxae onwards. Elytron sometimes explanate laterally beyond epipleuron. Underside setose. Fore coxal cavities open behind. Apex of abdomen in ♂ with a shallow even emargination (Fig. 18), ♀ with a short longitudinal bifurcation (Fig. 19). Legs moderately robust, similar in both sexes, apex of tibiae without ventral spur, lateral apices with a comb-like row of short spines. Length of basal segment of fore and mid tarsi more or less equal to combined length of the two preceding segments; basal segment of hind tarsus 1·2× as long as preceding segments combined. Claws distinctly bifid. Basal segment of fore tarsus in ♂ only slightly more enlarged than basal segment of mid tarsus.

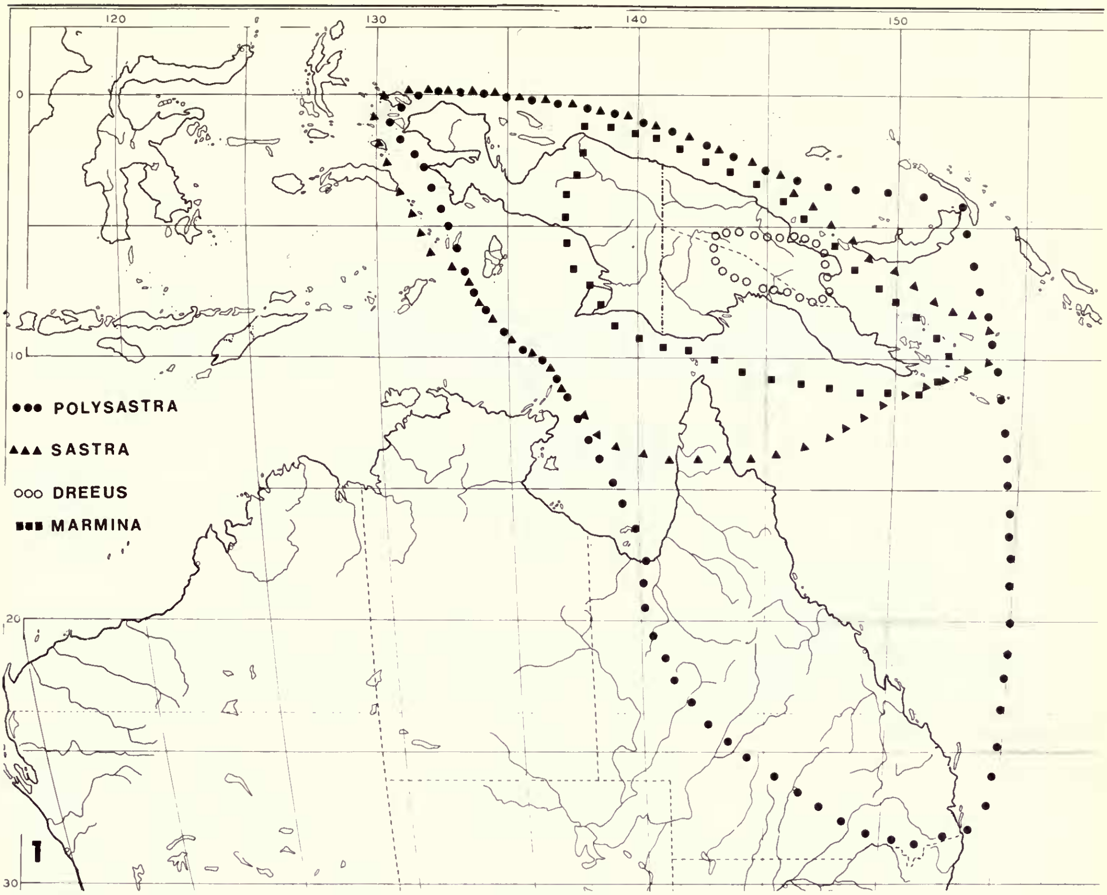
DIAGNOSIS. Head with gena weakly emarginate medially, minimum length of gena not less than 0·5× length of antennal socket. Apical segment of maxillary palp subconical, length slightly greater than preceding segment. Labrum small, not obscuring sides of mandibles. Pseudoclypeus distinct, length slightly greater than half that of labrum. Frons medially convex and somewhat declivous anteriorly, length not greater than that of an antennal socket. Antennal sockets separated by not more than half width of a socket, anterior margins level with those of eyes but not contiguous. Postantennal swellings transverse, delimited behind by a narrow horizontal groove and separated medially by a longitudinal extention of the coronal 'suture', anterior margins of swellings confluent with frons between antennal sockets and of similar elevation. Vertex with puncturation sparse or almost absent. Antennae similar in both sexes (Figs 9, 10), segments filiform, basal segment 1·25× length of second, segment 3 at least 2·0× length of second and 1·3× fourth, fifth segment slightly shorter than fourth, segments 6, 7 and 8 subequal and slightly shorter than fifth, ninth and tenth segments equal, slightly shorter than eighth, segment 11 1·2× length of tenth, all segments setose, density of setae increasing from segment 4 onwards. Scutellum on average 1·2× longer than broad, apex subtruncate, often medially convex. Elytron on average 2·5–3·0× longer than broad, average maximum width 1·2× width at apex of scutellum. Post humeral sublateral longitudinal depression almost absent or weakly indicated by raised outer margin, surface without carinae or rugosities. Underside minutely punctured throughout. Metasternum transverse, length at least 2× that of mesosternum, medially convex. Basic structure of ♀ genitalia, bursa, position and structure of styli etc. as in (Fig. 38). Median lobe of aedeagus in ♂ forming an elongate chitinous tube (Figs 25–31). General structure as in *Polysastra* (Fig. 32).

DISTRIBUTION. Papua New Guinea, Irian Jaya, Trobriand Islands, D'Entrecasteaux Islands (Map 1).

DISCUSSION. This genus is superficially similar to *Paumomua*; it differs principally in having a tooth on the lateral margin of the pronotum, antennal segments of different proportions, e.g. third segment longer than fourth, and a longer apical segment of the maxillary palp. Species with subparallel-sided elytra may also appear similar to certain *Momaea* species, but again can be distinguished from these by the structure of the pronotum and the distance between the anterior margin of the frons and the eyes. Nothing is known about the biology of this genus.



Figs 16–31 *Polysastra, Dreeus* and *Marmina*, taxonomic characters. 16–21, apical segment of abdomen showing emargination of (16) *Polysastra* sp. ♂; (17) *Polysastra* sp. ♀; (18) *Marmina* sp. ♂; (19) *Marmina* sp. ♀; (20) *Dreeus* sp. ♂; (21) *Dreeus* sp. ♀. 22, 23, *Dreeus distincta* ♂, aedeagus, dorsal and lateral view. 24, *D. distincta* ♀, spermatheca. 25, 26, *Marmina quadripustulata* ♂, aedeagus, dorsal and lateral view. 27, *M. quadripustulata* ♀, spermatheca. 28, 29, *Marmina* sp. B ♂, aedeagus, dorsal and lateral view. 30, 31, *Marmina* sp. A ♂, aedeagus, dorsal and lateral view. (Figs 25–31 drawn to same scale.)



Map 1 Range of genera treated here.

Key to species of *Marmina*

1 Elytron with colour pattern, puncturation distinct but not strong, punctures on humeral area 1–2× their own width apart 2

– Elytron unicolorous or with humerus similar in colour to pronotum, puncturation fine, punctures minute, 3–4× their own width apart 3

2 Elytra subparallel-sided, deep submetallic green with irregular transverse median and subapical yellow patches, these not contiguous with lateral margin. Head, pronotum and scutellum dull testaceous to golden yellow. Vertex posterior to post antennal swellings usually dark reddish brown. Tibiae and tarsi deep reddish brown to pitchy black. Length 8·5–11·5 mm (Fig. 116). Genitalia as in Figs 25–27. (Trobriand Islands, D'Entrecasteaux Islands)..... ***quadripustulata*** (p. 220)

– Elytra subovate, lateral margin explanate beyond epipleuron, colour testaceous with irregular dark brown markings (Fig. 118). Pronotum testaceous with ill-defined reddish brown patches on disc, lateral tooth and sublateral posterior convex areas. Head with frons, post antennal swellings and vertex dark reddish brown, intermediate areas testaceous. Underside testaceous. Basal three-quarters of femora and basal quarter of tibiae testaceous, rest of legs dark reddish to pitchy brown. Antennal segments with base of each segment testaceous. Length ♂ 9·0 mm. (Fig. 118.) Aedeagus as in Figs 30, 31. (NE. Papua New Guinea) species **A** (p. 220)

3 Elytron deep bluish to pitchy brown, reddish along margins, humerus light orange-brown. Head, pronotum and scutellum dull testaceous. Metasternum and abdomen pitchy brown to black, rest of underside testaceous. Tibiae usually darker in colour than femora. Antennal segments 1–5 dull orange-brown, rest of segments becoming darker towards apices. Length 9·1–9·3 mm. (Fig. 117.) (SE. Papua New Guinea).................... ***basalis*** (p. 220)

- Elytron deep purplish black with a weak brassy lustre on humeral area, lateral margins and epipleuron testaceous. Head, pronotum and scutellum dull testaceous. Coloration of underside as in *basalis*. Legs testaceous. Antennal segments 1–4 testaceous, rest dark reddish brown. Length ♂ 7·5 mm. (Fig. 119.) Aedeagus as in Figs 28, 29. (SE. Irian Jaya) ... species **B** (p. 220)

Marmina quadripustulata (Jacoby) **comb. n.**

(Figs 25–27, Map 10)

Sastra quadripustulata Jacoby, 1904: 402. LECTOTYPE ♀, TROBRIAND ISLANDS (BMNH), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

Trobriand Islands: 1 ♂ (paralectotype) (MCZ). **D'Entrecasteaux Islands**: 1 ♂, 1 ♀ (paralectotypes), Fergusson Island (BMNH); 2 ♀, Goodenenough Island, xii. [18]96 (*A. S. Meek*); 3 ♀, Fergusson Island, ix–xii. [18]95 (*A. S. Meek*) (MCZ).

Marmina basalis (Jacoby) **comb. n.**

(Fig. 117, Map 10)

Sastra basalis Jacoby, 1886: 72. LECTOTYPE ♂, NEW GUINEA: Fly River (*L. N. D'Albertis*) 1876–77 (MCZ), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

New Guinea: 1 ♀ (Wallace) (BMNH).

Two further species belonging to this genus are included in the key but are not described as they are represented by only single specimens. Collecting data of these species are as follows.

Marmina sp. **A**

(Figs 30, 31, 118, Map 10)

Papua New Guinea: 1 ♂, Morobe District, Mt Kaindi nr Wau, montane forest, *c.* 8000 ft, 16.iv.1965 (*J. J. H. Szent-Ivany*) no. 19031 (DPI).

Marmina sp. **B**

(Figs 28, 29, 119, Map 10)

Irian Jaya: 1 ♂, Sabang, 12.vii.1907 (*Lorentz*) (ITZ).

POLYSASTRA **gen. n.**

Type-species: *Sastra costatipennis* Jacoby.

GENERAL FORM. Body elongate, elytra subparallel-sided to pyriform. Dorsum either distinctly setose or with setae confined within margins of punctures. Combined length of antennal segments equal to at least three-quarters of body length, third segment at least 1·4× length of fourth segment and 1·8× second, segments filiform in both sexes (Figs 7, 8). Eyes large and protuberant. Pronotum transverse, lateral margins produced into a distinct tooth in anterior half, apex acute or broadly rounded, anterior width not exceeding that of head plus eyes, maximum width at least 1·3× greater than that of head plus eyes but not exceeding that of elytra at humeri; sublateral depressions present either side of disc, disc with small anterior and posterior depressions which may be confluent in some species. Primary setal pores tuberculate. Elytra variable, evenly convex, costate or rugose, with uniform or irregular puncturation, derm translucent to metallic. Epipleuron present to apical quarter, a supra-costal flange present in some species. Underside setose. Fore coxal cavities open behind. Apex of abdomen in male with a deep triangular emargination, evenly rounded in female (Figs 16, 17). Legs slender, similar in both sexes, apices of tibiae without ventral spurs, lateral edges with a comb-like row of short spines. Basal segment of fore and mid tarsi slightly shorter than segments two and three combined, basal segment of hind tarsus slightly longer than segments two and three combined. Claws distinctly bifid. Basal segment of fore tarsus enlarged in male.

Diagnosis. Head with gena emarginate medially, emargination almost reaching anterior margin of eye (Fig. 14). Apical segment of maxillary palp conical, length more or less equal to that of preceding segment. Labrum small, not obscuring sides of mandibles. Pseudoclypeus distinct, length not more than half that of labrum. Frons either medially convex or entirely depressed, length not greater than half that of an antennal socket, sockets separated by less than width of socket, anterior margins level with those of eyes. Post-antennal swellings elevated above level of vertex, contiguous with frons between sockets and separated medially by a narrow longitudinal groove which terminates at frons. Vertex with or without irregular puncturation, coronal 'suture' usually distinct. Eyes large and prominent, at least 3·0× longer than antennal socket. Antenna with basal segment becoming gradually broader towards apex, length at least twice that of second segment, third segment 2·5× length of second and 1·5–2·0× that of fourth; fourth, fifth, sixth and seventh segments subequal, eighth segment slightly shorter than seventh, segments eight, nine and ten subequal, segment eleven 1·5× length of tenth segment, all segments setose. Pronotum transverse, degree of convexity and development of depressions variable, lateral tooth well developed with apex acute or weakly developed and broadly rounded, lateral margins always produced, never evenly rounded, type and density of puncturation variable. Scutellum triangular, length either equal to or slightly greater than width, apex rounded or subtruncate. Average length of elytron 3·3× longer than broad, facies variable (see notes on species groups). Underside finely punctured throughout, metasternum convex, at least 3·0× as long as mesosternum. Legs of similar form in both sexes, slender, length of hind leg equal to or slightly longer than that of elytron, length of fore and mid legs slightly less than that of hind leg, all femora more or less equal in width, tibiae more or less straight.

Aedeagus a narrow, dorsally curved, chitinous tube, the apical section dorsally flattened. Viewed dorsally (Fig. 32) it occupies the length of the abdomen and lies laterally, slightly to the right of the gut. The median lobe and the basal struts are fused, forming a single unit. The median orifice is large and opens on the dorsal side of the apical section. The apex usually has some form of projection, ranging from a blunt knob to a large tooth. The aedeagus lies within a membranous bag, the genital atrium, to which the arms of the tegman (Sharp & Muir, 1912) or spiculum (Varmer, 1969) are attached at the apical quarter (Fig. 32), the remaining strut of the spiculum remaining free of the atrium wall until it enters the basal orifice where it curves upwards between the curved basal struts. The non-eversible portion of the endophallus, which is continuous with the median ejaculatory duct at the base of the aedeagus, appears as a dark tube within the median section of the median lobe; it becomes confluent with the internal sac in the apical quarter which appears as a dark amorphous shape and can be seen protruding at the base of the median orifice together with the projecting apex (which varies in shape) of the supporting sclerite, which lies in an inverted S-shape inside the sac at rest. On evagination the sclerite runs through the centre of the sac and through the phallotreme where it fuses with the outer wall of the sac, acting as a supporting strut (Fig. 33). The evaginated sac is small and simple in shape but the walls are fairly robust, being covered with setae and spicules (Fig. 33). The sac has proved very difficult to evaginate in this genus, principally due to the narrow structure of the aedeagus and the rigidity of the supporting sclerite which lies in an inverted S-shape at rest and has to be 'popped' straight. Therefore the sac has not been used here as a specific diagnostic character.

The female genitalia (of which the spermatheca is used here as a specific diagnostic character) are enclosed in a membranous tube, the apices of which are the chitinous plates of the eighth tergite and sternite (hemitergites); long stout setae are present along the anterior margin of both plates; with the ventrites removed the gut can be seen lying in front of the genitalia (Fig. 35). The anterior margin of the entrance to the gut forms a shallow membranous fold which is attached to the posterior region of the eighth tergite, the hind region of the gut entrance forming a deep blind fold, the hind margin of which is attached to the anterior margins of the base of the styli (Fig. 36). The styli comprise two elongate hollow tubes which, at the base, open into the region between the fold formed by the hind margin of the gut and the anterior wall of the vagina (Fig. 36). There are no distinct coxities or supporting valvifers. Each stylus has a tuft of long, curved, sensory setae at the apices. The hind margins of the base of the styli are attached to the anterior margin of the wall of the vagina; the entrance to the vagina (vulva) lies between the styli and the ligular (Fig. 36). The vagina and the bursa copulatrix (Fig. 35) form a convoluted membranous sack; there is no distinct elongated constriction between the vagina and the bursa as in *Dreeus* (Fig. 34). The spermatheca (Fig. 35), which is a strongly chitinous curved structure, is attached to the dorsal side of the anterior end of the bursa by a short membranous duct (Fig. 35). The spermathecal gland may be seen attached to the posterior region of the spermatheca above the attachment of the spermathecal duct (Fig. 35). The oviduct arises from the median region of the ventral wall of the bursa. The principal interspecific diagnostic characters are the shape of the spermatheca and ligular, length of styli and the density and position of the setae on the hemitergites. The general structure, i.e., proportions of the vagina, bursa and plates etc. are generic characters (Figs 34–38).

Distribution. Papua New Guinea, Irian Jaya, New Britain, Trobriand Islands, D'Entrecasteaux Islands, N. Australia (Map 1).

Discussion. *Polysastra* is closely allied to *Sastra*. Both genera belong to a group of primarily Australasian Galerucini which is characterised by an elongate form (Figs 1–3), emarginate genae (Fig. 14) and the third antennomere being at least 1·3× longer than the fourth. *Polysastra* differs from *Sastra* (Fig. 1) in having a distinct tooth on the lateral margin of the pronotum (Fig. 2) less emarginate genae, and variable elytral facies ranging from evenly convex to rugose or carinate; the dorsal puncturation and setal length are also very variable. The two genera have similar geographic ranges (Map 1).

Very little is known about the biology of *Polysastra*. Species occur in a wide range of habitats throughout New Guinea, from high moss forest to lowland marshy areas. Various species have been found on cultivated plants in gardens and plantations but there is no precise record of feeding. No species have as yet been found to be of any significant economic importance. The majority have been collected at various forms of light, which suggests that they may be most active at night.

In comparison with most other genera of Galerucinae the species of *Polysastra* exhibit an unusually wide range of external variation. A study of those treated here and *c.* 40 undescribed species showed that certain groupings, based on external characters, were evident within the genus. Eleven such species groups have been defined here, to facilitate the preliminary identification of members of this genus. Further groupings based on additional characters may be apparent within these species groups and additional notes have been provided on each group to supplement the information derived from the primary group key. At present it is not feasible to describe all the new species examined, but at least one new species from each 'group' is described here as a representative example.

At first sight the external characters exhibited by these species groups may suggest that they represent monophyletic groups. However, lack of geographic correlation between the species of a group, the occurrence of intermediate species, and the pattern of variation and overlap in genitalic characters lends little to support this supposition. The occurrence of similar aedeagal forms in externally dissimilar groups which show relative constancy of spermathecal structure suggests that genitalic characters may prove more useful in elucidating phyletic relationships of *Polysastra* species than similarities in external form. It is hoped that this preliminary study will provide a helpful basis for future work on this genus.

Groups and species are dealt with in alphabetical order. Type-data etc. of those species transferred from *Sastra* are included with the descriptions of the new taxa. The general form and genitalia of all the species dealt with in this genus are illustrated.

Key to species groups based on external characters

Note. The term pubescent is used here in a specific context to describe a fine, dense covering of setae.

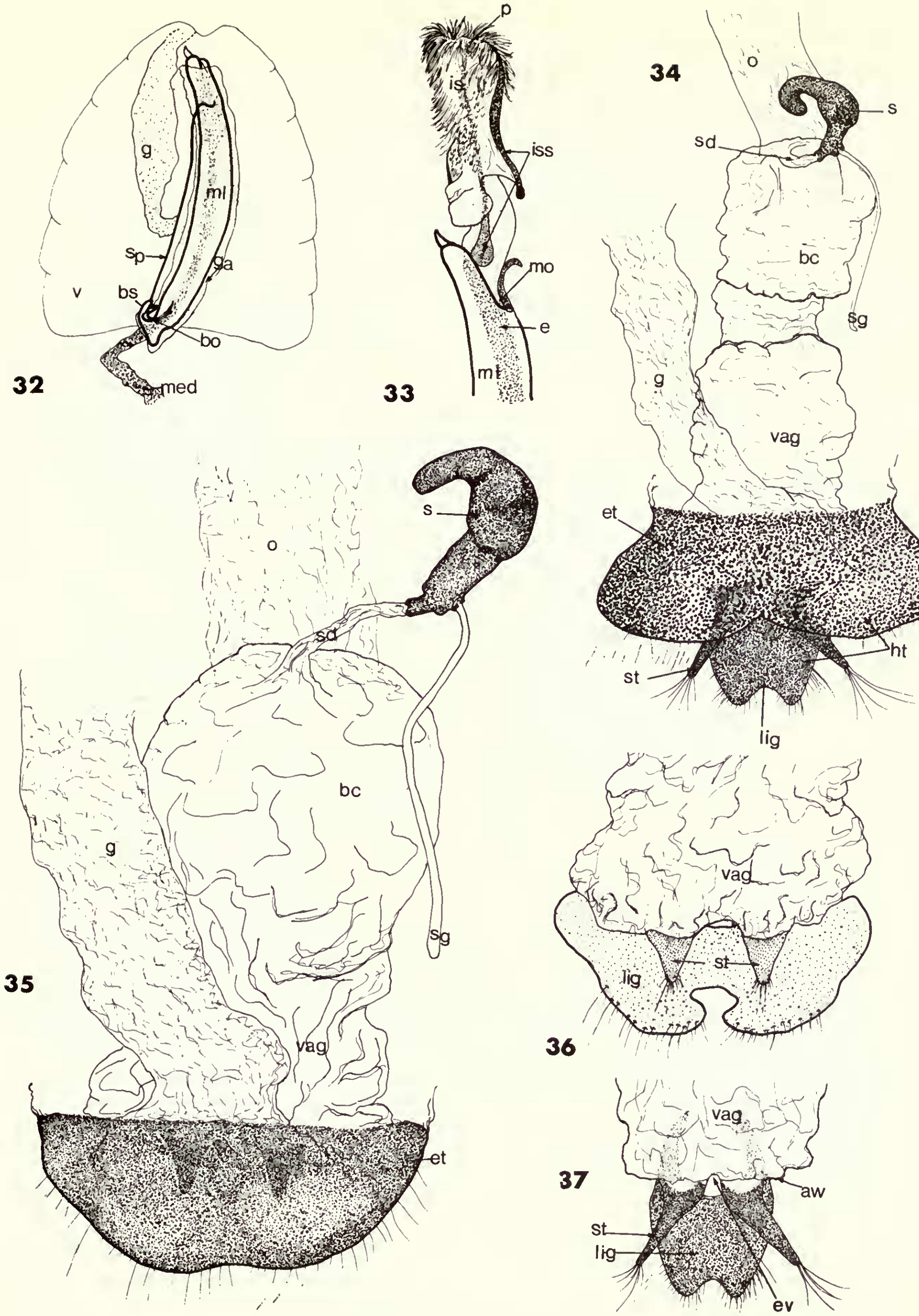
1 Elytron appearing distinctly setose or pubescent, setae extending well beyond margins of punctures 2

– Elytron appearing glabrous, majority of setae minute and confined within the margins of the punctures.
Sometimes with sparse, erect setae at intervals 4

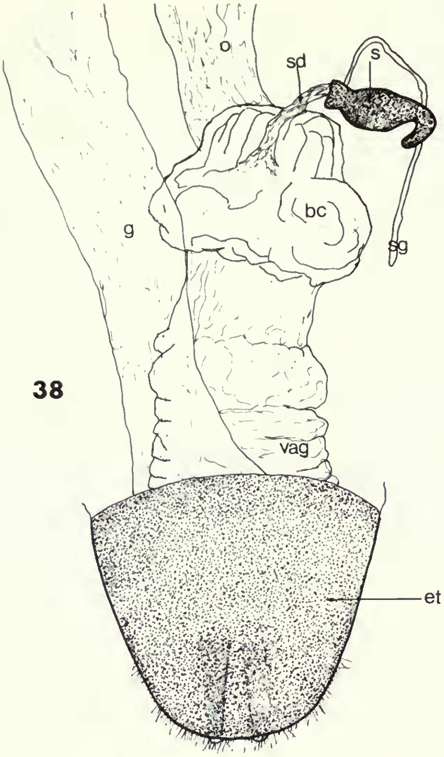
2 (1) Pronotum very densely punctured throughout, punctures fine to granulate; setae dense or forming pubescence. Elytron non-metallic, setae dense or forming pubescence. *C.* 8·0–11·0 mm 3

– Pronotum with irregular puncturation, punctures large and mostly shallow, setae sparse but distinct. Elytron metallic or with a metallic lustre, one or both margins of the post-humeral sublateral longitudinal depression forming cariniform ridges; setae distinct but not forming pubescence. *C.* 8·0–11·0 mm .... ***bicostata*-group** (p. 226)

3 (2) Elytron with outer margin of post-humeral sublateral longitudinal depression forming a distinct ridge, lateral margin somewhat explanate beyond epipleuron in median third; elytral puncturation fine to granular, punctures usually contiguous, derm usually



Figs 32–37 *Polysastra* and *Dreeus*, genitalia. 32, *Polysastra* sp., diagram of abdomen showing position of aedeagus at rest. 33, *Polysastra* sp., apex of aedeagus showing internal sac evaginated. 34, *Dreeus* sp., general structure of female genitalia. 35, *Polysastra* sp., general structure of female genitalia. 36, *Polysastra* sp., position of styli and ligular with eight tergite removed. 37, *Dreeus* sp., position of styli and ligular with eighth tergite removed.
aw – anterior wall of vagina; bc – bursa copulatrix; bo – basal orifice; bs – basal struts; e – endophallus; et – eighth tergite; ev – entrance to vagina; g – gut; ga – genital atrium wall; ht – hemitergites; is – internal sac; iss – internal supporting sclerite; lig – ligular (eighth sternite); med – median ejaculatory duct; ml – median lobe (aedeagus); mo – median orifice; o – oviduct; p – phallotreme; s – spermatheca; sd – spermathecal duct; sg – spermathecal gland; sp – spiculum (tegmen); st – styli; v – ventrites; vag – vagina.



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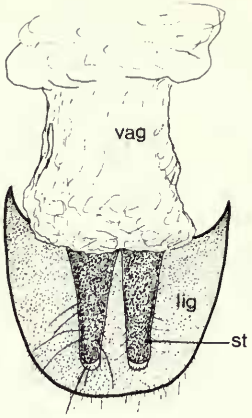

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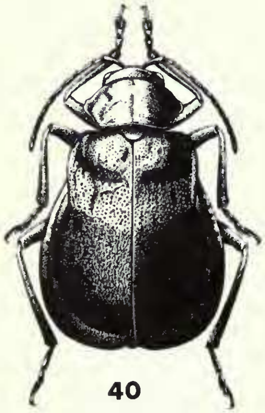

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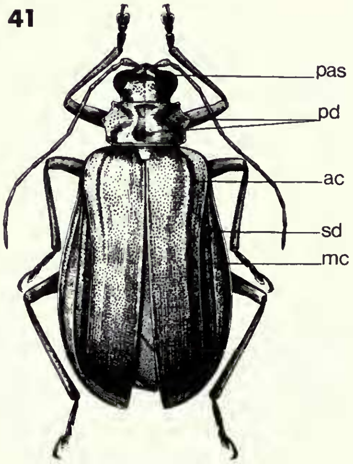

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Figs 38, 39 *Dreeus* sp., female genitalia. 38, general structure. 39, position of styli and ligular with eighth tergite removed.
bc – bursa copulatrix; et – eighth tergite; g – gut; ligular (eighth sternite); o – oviduct; s – spermatheca; sd – spermathecal duct; sg – spermathecal gland; st – styli; vag – vagina.

Fig. 40 General form of genus B.

Fig. 41 *Polysastra* sp. (*costatipennis*-group) illustrating general taxonomic characters.
ac – ad-lateral carina; mc – carinae formed by margins of depression; pas – post-antennal swellings; pd – pronotal depressions; sd – post-humeral sublateral depression.

microsculptured. Pronotum moderately convex, depressions shallow but distinct. *C.* 8·0–11·0 mm .... ***explanata***-group (p. 226)

– Elytron with post-humeral sublateral longitudinal depression weak to absent, margins never forming ridges, lateral margin not explanate; elytron finely punctured, punctures either contiguous or not more than 1·5× their own width apart, majority of species with distinct micropuncturation on intervals.
Underside may have a supra-costal flange running parallel to epipleuron, or a preapical pit or depression which appears as a convexity on the dorsal surface. *C.* 7·5–14·0 mm .... ***micropunctata***-group (p. 228)

4 (1) Elytron either irregularly convex with irregular puncturation or with the punctures situated around irregular non-punctate areas, which usually form distinct convexities or rugosities.
Outer margins of post-humeral sublateral longitudinal depression may or may not form carinae .... ***irregularis***-group (part) (p. 227)

– Elytron more or less uniformly punctured throughout, puncturation fine to coarse, no rugosities or irregularities present 5

5 (4) Elytron with one or both margins of post-humeral sublateral longitudinal depression forming cariniform ridges, admedian carinae sometimes present 6

– Elytron with post-humeral sublateral longitudinal depression weak to absent, margins never forming distinct ridges or carinae 9

6 (5) Frons entirely depressed to concave.
Elytra often with a metallic lustre. *C.* 8·0–13·0 mm .... ***varia***-group (p. 229)

– Frons triangular, medially convex or weakly to moderately convex, sometimes with a weak median depression, sides always elevated to some degree 7

7 (6) Elytron with both margins of post-humeral sublateral longitudinal depression forming cariniform ridges which are present from base of humeri to apical quarter, one or more entire or partial admedian carinae sometimes present 8

– Elytron with outer margin of post-humeral sublateral longitudinal depression forming a ridge, inner margin sometimes partially developed.
Elytron broadly rounded to pyriform; metallic or with a metallic or weakly metallic lustre; some species may have a slight crumpled appearance but puncturation more or less evenly distributed throughout. *C.* 10·5–14·0 mm .... ***metallica***-group (p. 227)

8 (7) Frons weakly elevated or with a shallow median depression. Elytron somewhat unevenly convex, sometimes weakly rugose, puncturation dense throughout, punctures may form horizontal or oblique rows of *c.* 5–7 punctures, derm usually microsculptured, humeral area often with one or more partial carinae, derm non-metallic. Vertex and pronotum densely and coarsely punctured throughout. *C.* 9·0–15·0 mm ***irregularis***-group (part) (p. 227)

– Frons triangular, medially convex. Elytron more or less evenly convex, puncturation more or less uniformly distributed throughout, admedian carina sometimes present, running parallel to sublateral carinae, derm often with a distinct metallic or submetallic lustre. Vertex and pronotum weakly and indistinctly to moderately punctured, punctures usually large and shallow. *C.* 8·0–11·0 mm .... ***costatipennis***-group (p. 226)

9 (5) Elytron broadly rounded, sublateral post-humeral longitudinal depression almost absent; very strongly microsculptured, giving a dull appearance, punctures fine, tending to form irregular groups. *C.* 8·0–10·0 mm .... ***irregularis***-group (part) (p. 227)

– Elytron not as above 10

10 (9) Pronotum broad and weakly convex, puncturation coarse and dense throughout, lateral tooth weakly developed and rounded, median depression joined by a shallow longitudinal narrow groove. Elytron strongly and densely punctured throughout, derm often with an aeneous lustre, post-humeral sublateral depression shallow. *C.* 10·0–13·0 mm ***abdominalis***-group (p. 225)

– Pronotum not as above, tending to be elongated, lateral tooth rounded to subacute, punctures irregular, size fairly large and shallow, sometimes confluent in places. Elytra irregularly punctured, derm smooth and shining. *C.* 9·0–12·0 mm...... ***inhabilis***-group (p. 226)

The *abdominalis*-group

Characterised principally by a broad, very weakly convex, strongly and densely punctured pronotum, which has a broad, rounded, weakly developed lateral tooth. Vertex coarsely and densely punctured throughout, size of punctures as on pronotum. Frons forming a more or less evenly convex ridge. Elytron with a shallow post-humeral sublateral longitudinal depression. Puncturation strong and dense throughout, giving a slightly rugose appearance, punctures distinctly smaller than those on pronotum, not more than 1·3× their own width apart, derm smooth and shining, often with a weak submetallic lustre; setae minute, confined within margins of punctures, sometimes a few short, erect setae on intervals. Spermathecal form distinctive, differing from that in other groups by being narrow and distinctly elongated (Fig. 83). None of the aedeagal forms found in other groups has been found in this group. General colour dark green to brown, often with lighter coloured lateral margins to the elytron.

COMMENTS. The species representing this group and dealt with here is *abdominalis* (Figs 144, 145). A further six undescribed species that fall into this group have been examined.

The *bicostata*-group

Resembling the *obscuricornis*-group but distinguished by the distinctly setose elytra, finer puncturation and weakly developed margins of the post-humeral, sublateral longitudinal depression. Admedian carinae sometimes present.

COMMENTS. The species representing this group and dealt with here is *bicostata* (Fig. 149). A further two undescribed species have been examined.

The *costatipennis*-group

Characterised principally by having both margins of the post-humeral sublateral depression forming distinct cariniform ridges from the base of the humeri to the apical quarter, one or more additional admedian carinae sometimes present. Derm metallic or with a submetallic lustre. Puncturation fairly uniform throughout, fine to moderate, punctures not more than their own width apart, setae minute and confined within the margins of the punctures. Vertex and pronotum with fairly large, shallow, irregular punctures which may be confluent in places, derm usually smooth and shining. Pronotum weakly to moderately convex, depressions shallow, lateral tooth broad and weakly developed. Frons distinctly convex medially.

COMMENTS. Representative species dealt with here are *costatipennis, fuscitarsis, helleri, kampeni, laetabilis, obscuricornis, purpurasco* (Figs 120–126). A further four undescribed species belonging to this group have been examined.

The *explanata*-group

Distinctly setose dorsally, with all setae extending beyond margins of punctures. Vertex and pronotum with fine to granulate, dense puncturation throughout. Pronotum with broad, weakly developed lateral tooth. Elytron pubescent and very finely punctured throughout, punctures not more than half their own width apart, derm usually distinctly microsculptured. Outer margin of post-humeral sublateral longitudinal depression forming a distinct ridge, lateral margins somewhat explanate beyond the epipleura (more pronounced in female). Frons convex, elevation more or less equal to that of post-antennal swellings. Elytral coloration dull testaceous to dark reddish brown. Species with these external characteristics exhibit a similar type of aedeagus which predominates in the *costatipennis*-group.

COMMENTS. The species representing this group and dealt with here is *explanata* (Fig. 128). A further six undescribed species that fall into this group have been examined.

The *inhabilis*-group

Slender in form with distinct, irregular dorsal puncturation. Punctures on head and pronotum slightly larger than those on elytra, usually not more than twice their own width apart. Pronotum elongate, lateral tooth broad and weakly developed, derm smooth and shining, setae minute. Elytron with post-humeral sublateral longitudinal depression almost absent, outer margin sometimes forming a weakly developed ridge, particularly over humeri; punctures irregularly distributed, 1·0–1·5× their own width apart, derm smooth and shining, setae confined within margin of punctures. Testaceous to light reddish brown.

COMMENTS. The species dealt with here and representing this group is *inhabilis* (Fig. 143). A further five undescribed species have been examined.

The *irregularis*-group

Elytron strongly microsculptured, or uneven or rugose. Punctures in majority of species situated between irregular non-punctate areas which take the form of irregular, sinuate, elongate, confluent rugosities which may be smooth and shining or distinctly microsculptured. Setae confined within margins of punctures but some species, i.e. *confusa*, have long suberect setae on the intervals. Vertex and pronotum distinctly punctured, pronotal setae usually confined within margins of punctures.

Comments. The majority of species that fall into this group may be further divided into subgroups by the additional characters detailed below. Examples of the *irregularis*-group dealt with here are *confusa* (Fig. 138), *duplicator* (Fig. 135), *irregularis* (Fig. 136), *sedlaceki* (Fig. 137), *rugulosa* (Fig. 140). A further 35 undescribed species of this group have been examined.

Subgroup 1

Elytron appearing distinctly rugose, non-punctate areas smooth and shining, derm usually with a distinct submetallic lustre, weakly developed partial carinae may be present on humeral area. Punctures situated in small groups of 2–5 between elevated areas which tend to be sinuate and confluent in places. Vertex and pronotum moderately punctured, pronotum convex with a well-developed lateral tooth which tends to be rounded, area around posterior primary setal pore often produced into a blunt 'tooth'. Frons tends to be very weakly convex or with a median depression and sinuate anterior margin. The species tend to range from reddish to bluish purple or bluish green or a combination of both, derm usually distinctly sub-metallic (Fig. 140).

Subgroup 2

Elytron with dense, moderate to coarse puncturation throughout, interspersed with mostly isolated, small, irregular, distinctly convex areas which tend to be slightly darker in colour than surrounding area. Irregular rows of long erect setae usually present, rest of setae minute. Vertex and pronotum coarsely and densely punctured throughout. Pronotum convex with a well-developed lateral tooth, usually with a subacute apex. Frons tending to form a more or less evenly elevated convex ridge. The species tend to be testaceous to reddish brown with an aeneous lustre (Figs 138, 139).

Subgroup 3

Elytron with weak to moderately developed, elongate, sinuate, confluent non-punctate areas which are moderately to strongly microsculptured, majority of punctures situated in groups between non-punctate areas, rest irregularly distributed. Vertex and pronotum with moderately dense, large, shallow well-defined punctures, derm usually microsculptured, pronotum usually weakly convex, lateral tooth well developed, often with an acute apex. Frons moderately convex to somewhat flattened dorsally. The species tend to be dull and darkly coloured, non-metallic (Figs 135, 136, 137).

Subgroup 4

Elytron unevenly convex, often with rugosities, puncturation irregular, derm often distinctly microsculptured. Margins of post-humeral, sublateral longitudinal depression forming cariniform ridges, one or more partial carinae may also be present on humeral area. Vertex and pronotum distinctly punctured, punctures sometimes coarse and confluent in some species (Figs 141, 150).

Subgroup 5

Elytron more or less evenly convex, derm very strongly microsculptured, puncturation fine, usually with a weak indication of grouping. Vertex and pronotum with distinct, large, shallow, usually non-confluent punctures. Usually small, black to dark green species with broadly rounded elytra (Fig. 142).

The *metallica*-group

Elytron distinctly metallic or with a metallic lustre; broadly rounded to pyriform, outer margin of post-humeral sublateral longitudinal depression forming a distinct ridge, inner margin sometimes partially developed. Dorsal setae minute, confined within margins of punctures, giving a glabrous appearance.

Pronotum with lateral tooth broad, weakly developed. Frons medially convex. The group can be further divided into three subgroups based on the additional characters detailed below.

COMMENTS. The species representing this group and dealt with here are *metallica*, *suavis*. A further seven undescribed species have been examined.

Subgroup 1

Elytron distinctly metallic with fine to moderate puncturation throughout, surface sometimes slightly uneven, giving a weakly crumpled appearance, outer margin of post-humeral sublateral longitudinal depression forming an irregular, weakly sinuate ridge, inner margin sometimes partially developed. Vertex and pronotum smooth and shining with fairly large, shallow, sparse to moderately dense puncturation. Elytron deep metallic green/blue or dark purplish blue (Fig. 132).

Subgroup 2

Elytron submetallic or with a strong metallic lustre, puncturation moderate to coarse throughout, giving a slight rugose appearance in some species, ridge formed by outer margin of sublateral depression sinuate. Vertex and pronotum with large coarse punctures which may be confluent in places, pronotum narrow, depressions distinct, lateral tooth sometimes slightly more acute than in group 1. Elytron dark brownish green to purplish brown with a dark green or purplish lustre (Fig. 133).

Subgroup 3

Elytron with a metallic lustre, puncturation strong and dense throughout, surface more or less even throughout. Pronotum broad, weakly convex; outer margin of post-humeral sublateral depression forming a well-developed, more or less straight cariniform ridge. Elytron dark brownish green with an aeneous lustre or bright green/blue (Fig. 134).

The *micropunctata*-group

Characterised by the distinct, fine, dense elytral setae that extend beyond margins of punctures and the presence of micropuncturation on the intervals between the regular elytral puncturation (subgroup 3). Post-humeral sublateral depressions absent, elytron evenly convex, puncturation fine and more or less uniform throughout. Vertex and pronotum densely punctured throughout, sometimes granulate, setae fine and distinct. Pronotum with a well-developed lateral tooth, usually with acute apices. Some species may have a distinct supracostal flange running parallel to the epipleura on the underside of the elytron, e.g. *micropunctatus* (Fig. 130), or a preapical pit-like depression; both may appear as a ridge or convexity on the upper surface of the apical quarter. This group divides into three principal subgroups based on the additional characters detailed below.

COMMENTS. The species representing this group and dealt with here are *montana* (Fig. 129) and *micropunctata*. A further nine undescribed species have been examined.

Subgroup 1

Vertex and pronotum with fine to granulate puncturation, setae long, fine and appressed. Pronotum often with two small admedian and adlateral convexities, lateral tooth well developed, apices subacute to acute. Elytron with very fine regular puncturation, punctures 0·5–1·5× their own width apart, intervals with distinct micropunctures from which the majority of the setae arise, setae short, fine and appressed, extending well beyond margins of punctures. Sometimes a supracostal flange or preapical depression on underside of elytron. Dull, black to reddish brown species.

Subgroup 2

Vertex and pronotum irregularly and densely punctured throughout, puncturation confluent, never fine and granulate as above. Setae long and appressed. Pronotum somewhat flattened and elongated, lateral tooth large and acute, wholly in anterior half, lateral margin between base of tooth and posterior primary setal pore more or less straight, derm with a slight vitreous lustre, setae long and appressed. Elytron with slightly larger and less dense puncturation than in subgroup 1, micropuncturation slightly less distinct due to surface reflection, setae very fine and appressed. The species tend to be elongate and slender with almost parallel-sided elytra, mostly pale testaceous to light reddish brown.

Subgroup 3

Vertex and pronotum as in subgroup 1, but elytron with fine contiguous puncturation throughout, micropuncturation almost absent due to density of regular punctures.

The *varia*-group

Very similar in appearance to the *obscuricornis*-group, but separated by the following characters. Frons entirely depressed, weakly concave in some species. Carinae formed by margins of post-humeral, sublateral longitudinal depression never joined at base of humeri, sometimes linked by an irregular, oblique convexity at around level of hind coxae, this convexity may also link ad-median carina to adjacent carina. Colour range variable as in the *costatipennis*-group.

Comments. The species representing this group and dealt with here are *varia* (Figs 146–148) and *venusta* (Fig. 127). A further three undescribed species have been examined.

Key to described species and subspecies of *Polysastra*

[Further undescribed species are referred to in the text.]

1 Elytron distinctly pubescent throughout, all setae extending well beyond diameter of punctures. Puncturation more or less uniform throughout, derm never rugose 2

– Elytron not pubescent, majority of setae minute, confined within margins of punctures, sparse erect setae sometimes present on intervals, puncturation irregular or uniform, derm rugose or costate 5

2 (1) Pronotal puncturation fine to granulate throughout, setae distinct. Elytron evenly convex, post-humeral sublateral longitudinal depression indistinct or absent 4

– Pronotal puncturation not as above. Elytron with a distinct post-humeral sublateral longitudinal depression, the outer margin of which forms a distinct ridge 3

3 (2) Elytron pale reddish brown with an overall light metallic green lustre. Head, pronotum and scutellum testaceous to light orange-yellow. Underside and legs testaceous. Vertex and pronotum irregularly punctured with large, shallow, mostly non-confluent punctures. Pronotal depressions well defined. Lateral margin of elytron not explanate beyond epipleura, setae not dense. Length 9·0–11·0 mm. (Fig. 149.) Genitalia as in Fig. 62. (Map 2.) .... **bicostata** (p. 232)

– Elytron dull orange to deep reddish brown, pronotum normally slightly lighter in colour. Head either concolorous with pronotum or dark as in elytron. Underside and legs testaceous to light orange-brown. Vertex, pronotum and scutellum with dense confluent punctures throughout. Lateral margin of elytron somewhat explanate beyond epipleura, setae dense. Length 9·5–12·0 mm. (Fig. 128.) Genitalia as in Figs 51, 84. (Map 3.) **explanata** (p. 233)

4 (2) Underside of elytron with a distinct supracostal flange running parallel to epipleuron from base to apical quarter where it joins sutural margin above apex. Dorsum dark reddish to pitchy brown, lateral margin of elytron reddish orange, distinctly lighter than rest of elytron. Length 10·5–11·5 mm. (Fig. 130.) Genitalia as in Figs 52, 85. (Map 3.) **micropunctata** (p. 238)

– Underside of elytron without a supracostal flange but with a small, distinct ovate pit just prior to apex. Dorsum dull yellow to light reddish brown. Head and pronotum slightly darker in colour than elytron. Metasternum often distinctly darker in colour than rest of underside. Length 10·0–13·0 mm. (Fig. 129.) Genitalia as in Figs 53, 86. (Map 3.) **montana** (p. 239)

5 (1) Surface of elytron uneven with irregular smooth usually non-punctate raised areas or rugosities which are often distinctly microsculptured. Head and pronotum with large irregular punctures 6

– Surface of elytron without such raised areas, puncturation more or less uniform throughout 10

6 (5) Length 6·9–9·0 mm. Dorsum dark yellowish to orange-brown. Elytron usually slightly lighter in colour than pronotum, with a golden to pinkish lustre. Pronotum *c.* 1·6× broader than long. Vertex, including post-antennal swellings, and pronotum with

large coarse confluent puncturation. Elytron with irregular longitudinal rows of long sparse setae. (Fig. 138.) Genitalia as in Figs 68, 96. (Map 3.) .... ***confusa*** (p. 232)

– Length 10·0–15·0 mm. Coloration not as above, pronotal punctures not confluent throughout. Other characters not so combined 7

7 (6) Length 8·5 mm. Elytron pale reddish pink with a slight purplish lustre. Metasternum and tibiae dark pitchy brown. Rest of body pale testaceous. (Fig. 140.) .... ***rugulosa*** (p. 241)

– Length 10·0–15·0 mm. Coloration not as above 8

8 (7) Length 11·0–15·0 mm. Pronotum at least 2·0× broader than long. Dorsum dark orange-brown to pitchy black. Elytron may have a faint purplish lustre and pale lateral margins. (Fig. 137.) Genitalia as in Figs 64, 95. (Map 7.) .... ***sedlaceki*** (p. 242)

– Length 10·0–11·5 mm. Pronotum not more than 1·8× broader than long. Elytron dark purplish to reddish brown. Head and pronotum pitchy brown to black 9

9 (8) Femora except for apices distinctly lighter in colour than rest of legs. Derm between humeri and sutural margin of elytron somewhat rugose and uneven. (Fig. 136.) Genitalia as in Figs 66–67, 93. (Map 5.) .... ***irregularis*** (p. 236)

– Femora concolorous with tibiae, deep reddish to pitchy brown. Derm between humeri and sutural margin of elytron not rugose. (Fig. 135.) Genitalia as in Figs 65, 94. (Map 3.) .... ***duplicator*** (p. 233)

10 (5) Frons convex, general elevation equal to or exceeding that of post-antennal swellings. Elytron with or without carinae. 12

– Frons entirely depressed, general elevation less than that of post-antennal swellings. Elytron carinate 11

11 (10) Elytron light orange to deep reddish brown, often with a strong, dark green lustre on humeral area and over longitudinal sublateral depression. Head and pronotum testaceous to light brownish red. Margins of post-humeral sublateral longitudinal depression forming carinae which are joined at base of humeri, a third weakly developed carina also present (more distinct in ♀) and running more or less parallel to inner carina, beginning at base of humeral area and becoming obsolete in apical quarter at about same level as termination of inner carina. Length 8·0–10·0 mm. (Fig. 127.) Genitalia as in Fig. 6. (Map 5.) .... ***venusta*** (p. 245)

– Coloration variable, elytron light reddish brown to deep purplish blue or varying shades of dark green. Pronotum testaceous to reddish orange or black. Margins of post-humeral sublateral longitudinal depression forming carinae, not joined at base of humeri, a third indistinct irregular carina also present and linked to inner carina of depression by an oblique irregular convexity just below humeral area. All longitudinal carina becoming obsolete in apical quarter. Length 7·0–12·0 mm. (Figs 146, 147, 148.) Genitalia as in Figs 58–60, 100, 101. (Map 6.) .... ***varia*** (p. 243)

12 (10) Elytron not carinate, puncturation irregular, derm weakly rugose, dark testaceous or green to pitchy brown 13

– Elytron carinate, with fine regular puncturation, strong metallic blue/green 14

13 (12) Elytron dull greenish to pitchy brown, lateral margins normally lighter, derm weakly rugose, puncturation more or less evenly distributed throughout. Head and pronotum testaceous to light yellowish brown. Pronotum with dense coarse puncturation, derm microsculptured. Scutellum triangular, apex acute. Length 7·5–12·0 mm. (Figs 144, 145.) Genitalia as in Figs 50, 83. (Map 4.) .... ***abdominalis*** (p. 232)

– Body except for head opaque testaceous to light orange-brown, elytron often with irregular pigmentation. Head normally darker in colour than pronotum. Pronotum with large non-confluent punctures, derm smooth and shining. Scutellum distinctly longer than broad, apex truncate. Length 7·5–11·0 mm. (Fig. 143.) Genitalia as in Figs 63, 97. (Map 3.) .... ***inhabilis*** (p. 235)

14 (12) Elytron with margins of post-humeral sublateral longitudinal depression forming carinae which are joined at base of humeri, a weakly developed admedian carina may also be present, running parallel to inner carina, derm often with a submetallic lustre 16

– Elytron with only the outer margin of the post-humeral sublateral longitudinal depression forming a carina or ridge, inner margin sometimes partially developed but never joined to outer, derm deep metallic blue or green.

Head, pronotum, scutellum and metasternites either dark orange to reddish brown or black 15

15 (14) Elytron almost pyriform, bright metallic blue or green, outer margin of sublateral

longitudinal depression forming an irregularly developed ridge, inner margin only partially developed, sinuate. Pronotum *c.* 1·8× broader than long with small indistinct punctures 1·5–2·0× their own width apart. Metepisternum microsculptured, punctures minute, 2·5–3·0× their own width apart. Median area of vertex raised and impunctate. Length 9·5–13·0 mm. (Fig. 131.) Genitalia as in Figs 54, 98. (Map 7.) **suavis** (p. 243)

– Elytron subparallel-sided, dark metallic green, lateral margin often with bluish or purplish lustre, outer margin of post-humeral sublateral depression forming a distinct, well-developed, more or less straight ridge, inner margin indicated by a short indistinct sinuate ridge. Pronotum at least 1·95× broader than long, punctures mostly situated along anterior margin and in lateral area of depressions. Metapisternum strongly microsculptured, punctures minute, indistinct due to microsculpture. Vertex irregularly punctured. Length 9·5–13·0 mm. (Fig. 132.) Genitalia as in Figs 55–57, 99. (Map 7.) .... **metallica** (p. 238)

16 (14) Elytron dark submetallic green or brownish green, sometimes with distinctly lighter lateral margins, but never lighter sutural margin. Pronotum testaceous to light orange-brown. Head with vertex reddish to pitchy brown or concolorous with pronotum 17

– Coloration not as above 19

17 (16) At least three-quarters of lateral area of elytron, from outer margin of post-humeral sublateral longitudinal depression to lateral margin, light reddish brown. Tibiae and apices of femora pitchy brown. N. Australia, D'Entrecasteaux Islands 18

– Elytron entirely dark metallic green. Legs unicolorous.
Head and pronotum testaceous to light reddish brown. Length 8·5–10·5 mm. (Fig. 123.) Genitalia as in Fig. 70. (Map 2.) .... **laetabilis** (p. 237)

18 (17) Anterior area of head including post-antennal swellings testaceous, usually concolorous with pronotum, vertex deep reddish brown. Lateral area of elytron entirely red to reddish brown. Third admedian carina beginning at level equal to that of apex of scutellum, present to apical quarter. Length 8·5–11·0 mm. (Fig. 121.) Genitalia as in Figs 71, 87. (Map 8.) .... **obscuricornis** (p. 239)

– Head entirely dark reddish brown. Lateral margin of elytron reddish brown from level equal to that of apex of metepisternum to apices. Third ad-median carina present from level equal to that of base of humeri where lateral carinae join, to apical quarter. Length 7·0–10·5 mm. (Fig. 125.) Genitalia as in Figs 74, 91. (Map 2.) **purpurasco viridis** (p. 241)

19 (16) Elytron light orange to reddish brown with a distinct, submetallic dark green longitudinal band extending from humeral area to apical quarter, basal quarter sometimes entirely dark green. Head anterior to post-antennal swellings, pronotum, scutellum, underside and femora opaque, testaceous; rest of head, antennae, tibiae and tarsi deep reddish to pitchy brown. Frons broadly triangular, not strongly convex. Elytral puncturation never coarse or confluent. Length 6·9–10·0 mm. (Fig. 120.) Genitalia as in Figs 72, 88. (Map 2.) .... **costatipennis** (p. 233)

– Coloration not as above. Frons convex, usually with a horizontal median keel 20

20 (19) Elytron light orange to dark reddish brown with a distinct, pale submetallic pinkish lustre which sometimes has a greenish reflection, lateral margins often lighter in colour than rest of elytron. Pronotum, scutellum and underside testaceous to pale orange-yellow, rest of body dark reddish brown, underside of femora often lighter in colour than rest of legs. Length 8·9–12·5 mm. (Fig. 126.) Genitalia as in Figs 69, 95. (Map 2.) .... **fuscitarsis** (p. 234)

– Elytron reddish purple to deep bluish purple, sometimes with a bright bluish green lustre on humeral area (in deep purple specimens this tends to extend over the whole elytron). Head and pronotum concolorous, testaceous to purplish red. Tibiae normally darker in colour than femora. Teneral specimens orange to dull reddish brown with a slight green or purplish lustre 21

21 (20) Elytron strongly or coarsely punctured, punctures sometimes confluent in places, particularly on humeral area, admedian carina well developed in basal half. Head, pronotum, scutellum, underside and legs either concolorous testaceous, or head, pronotum and scutellum red with antenna and tibiae dark reddish to pitchy brown,

underside brownish orange. Elytron orange-brown to deep purplish red with a green submetallic lustre over humeral area and often extending over sublateral depressions (deep purple specimens have the dark green lustre extending over whole elytron). Teneral specimens orange to dull reddish brown with a slight green or purple lustre. Length 7·5–10·5 mm. (Fig. 122.) Genitalia as in Figs 75–76, 89. (Map 4.) ..... ***helleri*** (p. 235)

– Elytron never coarsely punctured, punctures never confluent, on average 1·0–1·5× their own width apart, admedian carina not always well developed. Head, pronotum and scutellum testaceous to light orange-yellow, underside testaceous to light orange-brown. Antenna and tibiae dark reddish brown or testaceous to light reddish brown. Elytron light purplish pink to deep reddish purple with a purplish blue or greenish blue lustre. Teneral specimens with elytron light orange-brown with a light green or purplish lustre. Length 8·0–11·0 mm. (Fig. 124.) Genitalia as in Figs 73, 90. (Map 2). ***purpurasco purpurasco*** (p. 240)

Polysastra abdominalis (Jacoby) **comb. n.**

(Figs 50, 83, 144, 145, Map 4)

Sastra abdominalis Jacoby, 1904: 503. Syntype ♂, PAPUA NEW GUINEA: Moroka, 1300 m, vii–xi. [18]93 (*Loria*) (BMNH) [examined].

ADDITIONAL MATERIAL EXAMINED

Papua New Guinea: 112 ex., various localities (see Map 4) (AMNH, BMNH, IP, OIP, RWH, SAM).

COMMENTS. This species is representative of the *abdominalis*-group but it is not closely related to any of the taxa described here. All the undescribed species of the abdominalis-group examined are very similar in appearance, so care should be taken to check the genitalia of any specimen that is assigned to this species.

Polysastra bicostata (Jacoby) **comb. n.**

(Figs 62, 149, Map 2)

Sastra bicostata Jacoby, 1894: 305. LECTOTYPE ♂, IRIAN JAYA: Andai, 1892 (*W. Doherty*) (MCZ), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

Irian Jaya: 1 ♀, Dor[ey] (*Wallace*) (BMNH).

COMMENTS. This species is representative of the *bicostata*-group. It is similar in appearance to species of the *costatipennis*-group but may be distinguished by the distinct elytral setae.

Polysastra confusa **sp. n.**

(Figs 68, 96, 138, Map 3)

GENERAL FORM. Length 6·9–9·0 mm. Elytra subparallel-sided; post-humeral sublateral depression absent, outer margin present as an irregular broken ridge, well developed on humeri in ♀, surface of elytron with irregular smooth raised areas throughout, areas between these rugosities strongly punctured, majority of setae on elytron confined within margins of punctures, rest very long, fine and erect, forming irregular longitudinal rows on interspaces. Head dark orange-brown, pronotum and scutellum either concolorous with head or slightly lighter in colour; elytron either concolorous with pronotum or deeper, more reddish brown, raised areas usually slightly darker in colour than rest of derm; underside unicolorous testaceous or metasternum deep orange to reddish brown, basal three-quarters of femora testaceous, apical area dark orange to reddish brown, tibiae and tarsi either concolorous with apices of femora or slightly lighter in colour, setae translucent or pale golden.

DIAGNOSIS. Head with frons more or less evenly convex, elevation less than that of post-antennal swellings; post-antennal swellings distinctly elevated above vertex, hind margins ill-defined due to coarse punctuation; vertex with large, irregular, coarse, confluent punctures, derm strongly microsculptured, setae very fine. Antenna with long fine suberect setae. Pronotum transverse, *c.* 1·6× as broad as long, lateral tooth acute, wholly in anterior half and apices inclining towards anterior margin, width across tooth 1·1× greater than at its base, dorsal depressions ill-defined due to coarse puncturation. Puncturation coarse and confluent throughout, punctures similar in size to those on vertex, setae very fine and suberect. Scutellum triangular, apex subtruncate, length more or less equal to maximum width, punctures irregular, smaller and shallower than those on pronotum but distinctly coarser than those on adjacent area of elytron; setae fine and adpressed. Elytron *c.* 3·4× as broad as long, width increasing gradually from humeral angles to a maximum at around apical quarter, maximum width 1·3× greater than that at apex of scutellum, apices evenly rounded, area between irregular raised areas strongly punctured, punctures on average not more than their own width apart, those on humeral area slightly larger and denser than rest, but smaller and less coarse than those on pronotum, derm with a vitreous lustre. Underside finely and minutely punctured throughout. Metepisternum somewhat granulate, derm strongly microsculptured; punctures on metasternum 2–3× their own width apart, becoming slightly denser and irregular along lateral margins, derm smooth and shining, weakly microreticulate along lateral margins, setae on disc long, fine and suberect, becoming slightly shorter towards sides; abdomen indistinctly punctured, punctures 3–4× their own width apart, becoming slightly irregular and denser at sides, derm smooth, weakly microsculptured at sides, setae as on metasternum; femora finely punctured, punctures slightly larger and shallower than those on metasternum, 3–4× their own width apart, becoming denser at apices, microsculpture becoming stronger towards apices; tibiae finely granulate, setae shorter and more erect than on femora. Genitalia (Figs 68, 96).

Holotype ♂ (dissected), **Papua New Guinea**: Bulldog Road, *c.* 14 km S. Edie Creek, 1405 m, 4–10.vii.1966, light-trap (*G. A. Samuelson*) (BPBM).

Paratypes. **Papua New Guinea**: 1 ♀, same data as holotype; 1 ♀, Wau, 2400 m, 9–12.i.1962 (*J. Sedlacek*) (BMNH, BPBM).

COMMENTS. This species belongs to the *irregularis*-group. Care must be taken not to confuse it with an undescribed species from the same area that has similar facies, and a strongly microsculptured pronotum with weaker non-confluent puncturation than in *confusa*; the ♀ is without the ridge on the elytral humerus (Fig. 139).

Polysastra costatipennis (Jacoby) **comb. n.**

(Figs 72, 88, 120, Map 2)

Sastra costatipennis Jacoby, 1886: 73. LECTOTYPE ♂, PAPUA NEW GUINEA: Fly River, 1876–77 (*L. M. D'Albertis*) (MCZ), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

Papua New Guinea: 1 ♂, 5 ♀ (paralectotypes), same data as lectotype (BMNH, MCZ); 1 ♀, between Port Moresby and Brown River, 30 m, 29.x–1–xi.1965 (*J. Sedlacek*) (BPBM).

COMMENTS. This species is representative of the *costatipennis*-group and is most similar in appearance to *obscuricornis*.

Polysastra duplicator **sp. n.**

(Figs 65, 94, 135, Map 3)

Length 9·5–12·2 mm. Externally very similar to *irregularis*. The only distinct difference is in the coloration of the legs which, in *duplicator*, are unicolorous dark reddish. In comparison with *irregularis, duplicator* has a less coarsely punctured pronotum and the elytron is not so rugose. The two species can be easily separated by the genitalia characters (Figs 65, 94).

Holotype ♂, **Irian Jaya**: Star Range, 2360 m, bivak 40, 21.vii.1959 (*Neth. New Guinea Exp.*) (RNH).

Paratypes. **Irian Jaya**: 3 ♂, 7 ♀, same data as holotype (2 ♂, 1 ♀ BMNH); 4 ♂, 3 ♀ same data as holotype except 22.vii.1939 (1 ♂, 1 ♀ BMNH); 2 ♂, same data as holotype except 18.vii., 20.vii.; 3 ♀, same data as holotype except bivak 39a, 20.vi., 12.vii. and 23.vii.; 5 ♂, 9 ♀, Paniai, 22.viii.–17.ix.1939 (2 ♂, 2 ♀ BMNH); 1 ♂, Dejeresa, 31.ix.1939. (All RNH unless otherwise stated.)

Polysastra explanata **sp. n.**

(Figs 51, 84, 128, Map 3)

GENERAL FORM. Length 9·5–12·0 mm. Elytra subovate, setose, setae extending beyond margins of punctures, lateral margins explanate, puncturation more or less uniform throughout, post-humeral longitudinal sublateral depression almost absent but outer margin forming a well-developed ridge which begins at base of elytron, extends over humerus and continues more or less straight to apical quarter, apex evenly rounded; vertex, pronotum and scutellum coarsely and confluently punctured throughout. Head, pronotum and scutellum concolorous testaceous to dark orange-brown; elytron light orange-brown to dark reddish brown with a very weak, deep purplish lustre; underside testaceous to light orange-brown, femora concolorous with underside or slightly darker, apices often dark pitchy brown, tibiae, tarsi and antennal segments dark reddish brown; setae pale golden.

Diagnosis. Head with frons convex, maximum elevation more or less equal to that of post-antennal swellings, post-antennal swellings microsculptured, vertex punctured throughout, punctures confluent, more or less equal in size to largest on pronotum, setae long and fine, adpressed. Pronotum transverse, on average 1·8× as broad as long, lateral margins with a broad, weakly developed tooth, width across tooth *c.* 1·1× greater than minimum posterior width, dorsal depressions distinct, puncturation coarse and confluent throughout, derm strongly microsculptured, setae long, fine and suberect. Scutellum finely punctured and strongly microsculptured, setae as on pronotum. Elytron becoming broader and lateral margin becoming explanate from humeral angle to apical quarter, maximum width *c.* 1·3× (♂) and 1·5× (♀) greater than width at apex of scutellum, median area of basal quarter moderately convex with a small, round shallow depression at base of scutellum; puncturation fine and uniform throughout, punctures not more than their own width apart, size more or less equal to smallest on pronotum, derm finely microsculptured; setae shorter and somewhat stouter than those on pronotum. Underside finely and minutely punctured throughout. Punctures on disc of metasternum 3–4× their own width apart, derm weakly microsculptured, setae on disc shorter and finer than those at margins, puncturation of abdomen similar to that of metasternum, setae becoming longer towards middle and sides of segments. Legs with basal three-quarters of femora finely punctured, punctures 1·0–1·5× their own width apart, apical quarter granulate, setae long, fine and adpressed; tibiae granulate, setae short and stout, becoming denser towards apices. Wing fully developed. Genitalia as in Figs 51, 84.

Holotype ♂, **Papua New Guinea**: Kokoda, viii.1933, lower rain forest, 1300 ft (*L. E. Cheesman*) (BMNH).

Paratypes. **Papua New Guinea**: 2 ♂, same data as holotype; 3 ♂, 3 ♀, Kokoda, 1200 ft, vi–viii.1933 (*L. E. Cheesman*); 1 ♂, Maprik, 24.x.1957 (*J. Smart*) (BMNH); 1 ♂, Wau, Morobe District, 1200 m, 25.xii.1961 (*G. Monteith & J. Sedlacek*); 1 ♀, Bulolo Vatus, 700–800 m, 1–7.vi.1969 (*J. Sedlacek*); 2 ♀, Kokoda-Pitoki, 450 m, 25.iii.1956 (*J. L. Gressitt*); 5 ♀, Tsenga 1200 m, Upper Jimmi V, 15.vii., 13.viii., 14.viii.1955 (*J. L. Gressitt*) (1 ♂, 2 ♀ BMNH; 2 ♂, 3 ♀ BMNH).

Comments. This species is representative of the *explanata*-group. It does not bear any close affinity to the other *Polysastra* species described here. Three undescribed species which closely resemble this species and belong to this group have been examined, so care should be taken to check the genitalia of specimens when assigning them to this species.

Polysastra fuscitarsis sp. n.

(Figs 69, 95, 126, Map 2)

General form. Length 8·1–12.1 mm. Elytra subparallel-sided, outer margins of post-humeral, sublateral longitudinal, depressions forming distinct cariniform ridges which are joined at the base of the humeral angle; a longitudinal admedian carina is also weakly indicated running parallel to inner ridge. Puncturation of elytron uniform and dense, setae confined within margins of punctures. Head and pronotum distinctly punctured. Head either entirely dark reddish to yellowish brown, or with area anterior to post-antennal swellings distinctly lighter in colour than vertex. Pronotum and scutellum testaceous to orange-brown. Elytron light orange to reddish brown with a submetallic, pale purplish pink lustre which is often dark green over humeri in mature specimens. Underside testaceous to light orange-brown. Legs either entirely dark orange to reddish brown, or femora testaceous with dark apices, tarsi normally darker brown than tibiae. Setae pale golden. Fully winged.

Diagnosis. Head with frons triangular and medially convex, weakly declivous anteriorly, maximum elevation slightly greater than that of post-antennal swellings; post-antennal swellings well defined, elevated above level of vertex, hind margins oblique, lateral margins distinctly separated from inner margins of eyes by a shallow groove, derm smooth and shining, sparsely punctured. Vertex irregularly punctured with groups of ill-defined, often confluent, shallow punctures, derm around punctures irregularly depressed and weakly microreticulate, rest of derm smooth and shining, setae very fine, small and adpressed. Pronotum transverse, on average 2·1× broader than long, lateral tooth well developed, apex subtruncate, width at tooth on average 1·2× greater than minimum posterior width; lateral depressions shallow and ill-defined due to lateral declivity of pronotum, median depressions shallow but distinct, puncturation irregular, greatest density at sides where they may be contiguous or confluent, size variable, largest more or less equal to largest on vertex, derm smooth and shining, weakly microsculptured in strongly punctured areas, setae minute, fine and adpressed, those at sides confined within margins of punctures. Scutellum slightly longer than broad, apex subtruncate, weakly convex medially, sparsely and finely punctured, derm weakly microreticulate, setae short, fine and adpressed. Elytron *c.* 3·0× longer than broad, width increasing gradually from base of humeri to a maximum around middle which is 1·2× greater than width at apex of scutellum; outer margin of post-humeral sublateral longitudinal depression forming a distinct ridge, extending from base of elytron over humerus to apical quarter where it becomes obsolete, inner margin also forming a ridge which is joined to the outer at the base of the humeral angle and continues to apical quarter where it becomes obsolete just above termination of outer margin, an admedian longitudinal ridge also present, running parallel to inner ridge of depression, which is often indistinct or obsolete for parts of its length. Puncturation more or less uniform throughout, punctures 2·0–2·5× their own width apart, their size less than half that of lateral pronotal punctures, derm smooth and shining, weakly microreticulate in basal half, epipleura becoming obsolete about middle of apical quarter, anterior half with a shallow median groove. Underside finely and densely punctured throughout, punctures on disc of metasternum 3–4× their own width apart, becoming denser at sides, derm weakly microreticulate at sides; metepisternum densely microsculptured, punctures 1·0–1·5× their own width apart, setae long and fine on disc, becoming shorter and adpressed at sides. Abdomen finely punctured throughout, punctures 5–6× their own width apart, setae long and suberect, stouter than those on metasternum, derm smooth and shining, femora finely punctured, punctures on basal three-quarters 3·0–3·5× their own width apart, increasing in density to 0·5–1·0× width apart at apices, derm weakly microsculptured at apices, setae long, fine and adpressed, tibiae finely and densely punctured, becoming granulate towards apices, setae becoming shorter, stouter and more erect towards apices. Genitalia as in Figs 69, 95.

Holotype ♂, **Irian Jaya**: Bernhard camp, 50 m, vii–xi.1939 (*J. Olthof*) (Neth. Ind.-Amer. New Guinea Exped.) (BPBM).

Paratypes. **Irian Jaya**: 15 ♂, 44 ♀, same data as holotype (7 ♂, 20 ♀ BMNH); 3 ♂, 4 ♀, Iebele camp, 2250 m, xi.1938 (*L. J. Toxopeus*); 1 ♀, Idenburgh River, 400 m, 15.vii.–15.xi.1938 (*J. Olthof*); 1 ♀, letterbox camp, 3600 m, 27.ix.1938 (*L. J. Toxopeus*) (BPBM unless otherwise stated).

Non-paratypic material. 12 specimens, same data as holotype (BPBM).

COMMENTS. *P. fuscitarsis* belongs to the *costatipennis*-group. The species described here to which it bears the closest affinity is *purpurasco*.

Polysastra helleri (Weise) **comb. n.**

(Figs 75, 76, 89, 122, Map 4)

Sastra helleri Weise, 1917: 207. LECTOTYPE ♀, PAPUA NEW GUINEA: Toricelli Mts, i.1910 (*Schlaginhaufen*) (SMT), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

Papua New Guinea: 1 ♂, 5 ♀ (paralectotypes), same data as lectotype (1 ♂, 3 ♀ SMT; 2 ♀ NR). **Irian Jaya, Papua New Guinea**: 6 ♂, 11 ♀, various localities (Map 4) (BMNH, BPBM, MCZ, NR, RHW, SMT).

COMMENTS. This species belongs to the *costatipennis*-group. Of the species dealt with here, it is closest to *laetabilis*.

Polysastra inhabilis **sp. n.**

(Figs 63, 97, 143, Map 3)

GENERAL FORM. Length 7·5–11·0 mm. Elytra subparallel-sided, post-humeral sublateral depressions almost absent, outer margins forming weak ridges which are distinct over humeri in ♀, surface of elytron irregularly but uniformly punctured, very weakly rugose, setae minute, hardly extending beyond margins of punctures. Head and pronotum distinctly punctured. Head and pronotum either concolorous testaceous to dull reddish brown or with head distinctly darker in colour than pronotum. Elytron opaque testaceous to dull brownish yellow, basal sutural angle may be dark reddish brown; derm with a weak vitreous lustre in basal half. Underside testaceous to dull brownish yellow. Legs pale testaceous, apex of femora often dark reddish brown, setae pale golden. Fully winged.

Diagnosis. Head with broad triangular frons, slightly flattened dorsally, elevation less than that of post-antennal swellings, interantennal groove deep; post-antennal swellings strongly convex and elevated above level of vertex, hind margins rounded, sometimes ill-defined due to strong puncturation of vertex, lateral margins of swellings delimited by a narrow groove, surface irregularly punctured; vertex with strong, coarse, irregular puncturation which is particularly dense and often confluent behind post antennal swellings, punctures on centre of vertex often elongated, size variable, largest punctures more or less equal to largest on pronotum; derm shining, weakly microsculptured in areas of strong puncturation; median 'suture' almost absent; setae short and fine, adpressed or suberect. Pronotum transverse, *c.* 1·9× broader than long, lateral tooth broad, moderately well defined but often unevenly developed, width at tooth 1·2× greater than minimum posterior width; sublateral depression weak and ill-defined, median depressions distinct, anterior depression de-limited behind by two small adjacent convexities; surface distinctly punctured throughout, puncturation irregular, punctures *c.* 0·5–1·0× their own width apart, contiguous in places, in size more or less equal to those on vertex; derm smooth and shining; setae minute and adpressed. Scutellum 1·4× longer than broad, derm with small shallow punctures, setae short and adpressed. Elytron *c.* 4·5× longer than broad, width increasing gradually from below humeral angles to a maximum just below mid line, maximum width 1·2× greater than that at apex of scutellum; puncturation irregular, size more or less uniform throughout, punctures small and deep, less than half size of those on pronotum, tending to form small, horizontal oblique groups of *c.* five punctures separated from one another by not more than their own width; interspaces very weakly convex, giving a slight rugose appearance; setae minute, only just extending beyond margin of punctures; those in vestigial striae indistinct, sparse, short and decumbent. Epipleuron narrow, not becoming completely reflexed until apical quarter where it becomes obsolete. Underside finely and densely punctured throughout, disc of metasternum almost impunctate, width between punctures decreasing from 4–5× width of a puncture to less than 2× at sides of metasternum; derm becoming microsculptured towards sides; setae long and erect on disc, short and decumbent at sides, metepisternum very finely and densely punctured, derm strongly microsculptured, setae adpressed, punctures on abdominal segments fine and shallow, 1·5–2·0× their own width apart, sometimes ill-defined due to strong microsculpture on derm; setae long, fine and subadpressed, length decreasing slightly towards sides. Femora finely and sparsely punctured, punctures 3–6× their own width apart; derm microsculptured; setae long fine and adpressed, becoming shorter at apices. Tibiae finely and densely punctured, punctures 0·5–1·0× their own width apart, setae short, dense and stout. Genitalia as in Figs 63, 97.

Holotype ♂, **Irian Jaya**: Lake Habbema, 3250–3300 m, vii–viii.1938 (*L. J. Toxopeus*) (Neth. Ind.-Amer. New Guinea Exp. 1938) (BPBM).

Paratypes. **Irian Jaya**: 3 ♀, same data as holotype; 3 ♂, 4 ♀, same data except 4.ix. (2 ♂, 2 ♀ BMNH); 4 ♂, 2 ♀, Moss Forest Camp, 2800 m, 9.x.–5.xi.1938 (*L. J. Toxopeus*) (1 ♂, 1 ♀ BMNH).

Comments. *P. inhabilis* is representative of the *inhabilis*-group. Several undescribed and similar species have been examined, therefore care should be taken to check the genitalia when assigning specimens to this species.

Polysastra irregularis sp. n.

(Figs 66–67, 93, 136, Map 5)

General form. Length 10·0–11·5 mm. Elytra subparallel-sided, post-humeral sublateral longitudinal depressions shallow and ill-defined, outer margins forming ridges, surface of elytron rugose, punctures grouped between irregular non-punctate raised areas, majority of setae confined within margins of punctures, rest long, forming sparse, erect longitudinal rows. Head, pronotum and scutellum deep reddish to pitchy brown, elytron either concolorous with pronotum or lighter purplish red. Femora, except for apices, and abdomen testaceous. Antennae, apices of femora, tibiae and tarsi reddish to pitchy brown. Metasternum pitchy brown to black. Setae grey or pale golden. Fully winged.

Diagnosis. Head with frons somewhat flattened medially, weakly declivous anteriorly, sides more or less equal in elevation to post-antennal swellings which are distinctly elevated above level of vertex, hind margins of swellings ill-defined due to coarse, irregular, mostly confluent puncturation of vertex, derm microsculptured, setae very fine. Pronotum transverse, *c.* 1·8× broader than long, lateral tooth well developed, width across tooth 1·2× minimum posterior width, lateral depressions distinct, median depressions fairly well defined, puncturation irregular, punctures becoming denser at sides, majority of punctures not more than half their own width apart, sparser in and around median depressions, derm microsculptured, setae fine and adpressed, majority not extending much beyond margins of punctures. Scutellum triangular, 1·2× longer than broad, punctures slightly smaller and shallower than those on pronotum, mostly confined to median area, setae fine and adpressed, extending beyond margins of punctures. Elytron *c.* 3·8× as long as broad, width increasing gradually from humeral angle to a maximum just anterior to apical quarter, maximum width *c.* 1·3× greater than width at apex of scutellum, apices evenly rounded, surface irregularly rugose, raised areas between punctures distinctly microsculptured, punctures on average not more than their own width apart, size fairly uniform throughout, those on humeral area slightly larger than rest. Underside finely and densely punctured throughout, metepisternum strongly microsculptured. Punctures on anterior region of metasternum 1·5–2·0× their own width apart, becoming sparse and almost absent on median area of posterior half, microsculpture present towards sides of metasternum, setae long and fine, becoming shorter and more adpressed at sides. Punctures on abdominal segments 1·0–1·5× their own width apart. Femora finely and irregularly punctured, punctures 4·0–5·0× their own width apart on basal three-quarters and 1·5–2·0× their own width apart on apical quarter, setae long, fine and adpressed. Tibiae finely granulate, setae shorter and stouter than on femora, density increasing towards apices. Genitalia as in Figs 66–67, 93.

Holotype ♂, **Papua New Guinea**: NE. Morobe, Mt Kaindi, 2350 m, 18.vi.1973 (*J. L. Gressitt*) (BPBM).

Paratypes. **Papua New Guinea**: 2 ♂, 9 ♀, same data as holotype (1 ♂, 4 ♀ BMNH); 5 ♀, Morobe District (E), Mt Kaindi nr Wau, 2350 m, 3.ix.1973 (*J. L. Gressitt*); 2 ♂, 7 ♀, Mt Kaindi, 2400 m, 27.i.1963, 28.i.1963 (*J. Sedlacek*) (1 ♂, 3 ♀ BMNH); 5 ♀, Mt Kaindi, 2300 m, 2.iii.1966, 6.iv.1966, 4.iv.1966, 4.v.1967, 15.ix.1973, 2.i.1974 (*J. L. Gressitt*); (2 ♀ BMNH); 1 ♀, Mt Kaindi, 2350 m, 7.iv.1966, Malaise trap (*J. L. & M. Gressitt*); 2 ♀, Mt Kaindi, 2350 m, 22.vii.1974, 9–1.x.1974 (*A. D. Hart*); 3 ♀, Mt Kaindi, 2300 m, 10.i.1962, 8–9.vi.1962, 1–5.1962 (*J. Sedlacek*) (1 ♀ BMNH); 2 ♀, Mt Kaindi, 2250 m, 10.v.1968 (*J. Sedlacek*); 1 ♀, Mt Kaindi, 2300 m, 22.iii.1964 (*Josef Ku*); 1 ♂, 3 ♀, Mt Kaindi, on Meari Creek 9·5 mi[les] from Wau, 2050 m, 12.iii.1959 (*L. T. Brass*) (2 ♀ BMNH); 2 ♀, Wau, Edie Creek, 189 m, 8.viii.1963 (*P.S.E.L.*); 1 ♀, Wau, Edie Creek, 2000 m, 4–10.x.1961, m.v. light-trap (*J. & J. H. Sedlacek*); 1 ♀, Edie Creek, 14 km SW. Wau, 2000 m, 27.v.1962 (*J. L. Sedlacek*), 1 ♀, Edie Creek, 7000 ft, stn no. 6, 17.ix.1964 (*M. E. Bacchus*) (BMNH); 1 ♀, Wau, 1000–1250 m, 3.iii.1964 (*J. Sedlacek*); 1 ♀, Wau, 2400 m, 9–12.i.1962 (*J. & J. H. Sedlacek, G. Monteith & native collector*); 1 ♀, Wau, 1200 m, 26–27.ix.1964, m.v. light-trap (*J. Sedlacek*); 2 ♂, 1 ♀, Owen Stanley Range, Goilala, Bome, 1950 m, 24.ii–15.iii.1958 (*W. W. Brandt*); 1 ♂, same data except Loloipa, 21–31.xii.1957; 1 ♀, Central District, Mt Goliath, 5000–7000 ft (*S. Meek*) (MCZ); 1 ♀, Juliana bivak, 1800 m, 1.ix.1959 (RHN). (All BPBM unless otherwise stated.)

COMMENTS. This species is representative of the *irregularis*-group. The species described here to which it bears the closest affinity is *duplicator*.

Polysastra kampeni (Weise) **comb. n.**

Sastra kampeni Weise, 1917: 207. Type, PAPUA NEW GUINEA: Hoofdbivak [on Sepik River, 4°4′S, 141°15′E], xi.1910 (depository unknown).

COMMENTS. This species belongs to the *costatipennis*-group. It has not been possible to locate the type or any specimens determined as such, and the transfer is based on characters given in the original description.

Polysastra laetabilis (Weise) **comb. n.**

(Figs 70, 123, Map 2)

Sastra laetabilis Weise, 1917: 206. LECTOTYPE ♂, PAPUA NEW GUINEA: Hoofdbivak (Sepik River), 12.x.1910 (*Kampen*) (NR). (NR), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

Papua New Guinea: 1 ♀, same data as lectotype except 12–16.xi.1910 (NR); 1 ♂, May River, 6.vi.1963 (*R. Stratman*) (BMNH); 1 ♂, Mindimbe, Sepik River, 25.iv.1963 (*R. Stratman*) (BPBM).

COMMENTS. This species belongs to the *costatipennis*-group and has the same type of aedeagus as *purpurasco*.

Polysastra metallica (Jacoby) comb. n.

(Figs 55–57, 99, 132, Map 7)

Sastra metallica Jacoby, 1886: 72. Holotype ♀, New Guinea: 'Ramoi, ging [18]72' (*L. M. D'Albertis*) (MCSN) [examined].

Gronovius andaiensis Jacoby, 1905: 500. Holotype ♀, Irian Jaya: Andai (BMNH) [examined]. **Syn. n.**

Additional material examined

1 ♀, No. 88, 4.viii.1903 (no further data) (ITZ). **Papua New Guinea**, **Irian Jaya**: 127 examples, various localities (Map 7) (BMNH, BPBM, MCZ, OIP, SMT).

Comments. This species belongs to the *metallica*-group. Of the species described here it is closest to *suavis*; however, there are also a number of undescribed species which are similar in appearance to *metallica*, therefore the genitalia should be examined when determining specimens.

Polysastra micropunctata sp. n.

(Figs 52, 85, 130, Map 3)

General form. Length 10·5–11·5 mm. Elytra subpyriform, setae confined within margins of punctures, puncturation fine and dense throughout, post-humeral sublateral depressions absent, apices rounded, underside of elytron with a well developed supracostal flanage which runs parallel to epipleuron, from base of elytron to apical quarter where it curves inwards to meet sutural margin (Fig. 130), appearing as a narrow groove on dorsal surface. Vertex, pronotum and scutellum densely and confusely punctured throughout. Head, antennae, pronotum, scutellum, legs and underside except for abdomen, deep purplish brown to black, abdomen testaceous; elytron deep purplish brown to pitchy brown with a very weak, deep purplish green lustre, lateral margins bright orange-red from below humeral quarter (at a level equal to that of apex of metepisternum) to apex. Setae grey.

Diagnosis. Head with frons convex, weakly declivous anteriorly, elevation more or less equal to that of post-antennal swellings, post-antennal swellings well defined, distinctly elevated above vertex, vertex with an area of irregular, large, shallow confluent punctures directly behind swellings, rest of vertex finely and densely punctured throughout, punctures similar in size to smallest punctures on pronotum, derm strongly microsculptured, median area of vertex posterior to eyes with a shallow, oblique, ovate depression either side of 'suture'; setae very fine. Pronotum transverse, *c.* 1·8× as broad as long, lateral tooth well developed, width at tooth on average 1·2× greater than minimum posterior width, sublateral depressions well defined, median depressions shallow and ill-defined, punctures on disc shallow, distinctly larger than rest, remainder of pronotum finely and densely punctured throughout, often ill-defined due to strong microsculpturing of derm, setae long and fine, slightly shorter and stouter in median depressions. Scutellum, finely and densely punctured and strongly microsculptured, setae as on pronotum. Elytron 3·4× longer than broad, becoming gradually broader from just below humerus to a maximum width at around middle, after which it gradually decreases towards apex, maximum width in ♀ *c.* 1·3× greater than width at apex of scutellum, slightly less in ♂; dorsum more or less evenly convex, slight depression just prior to humeri below apex of scutellum. Puncturation irregular and dense throughout, punctures 1–2× their own width apart, more or less uniform in size, derm strongly microsculptured, setae shorter and denser than on pronotum, majority pale grey interspersed with slightly stouter white setae, ventral surface of elytron with a well developed supracostal flange which runs parallel to epipleuron from base to apical quarter where it curves inward to meet sutural margin. Underside finely and densely punctured throughout, punctures not more than 1·5× their own width apart, derm microsculptured, setae on abdomen slightly longer than those on rest of segments. Legs with femora minutely and densely punctured, punctures not more than their own width apart, setae long, fine and adpressed, tibiae granulate, setae short and stout, increasing in density towards apices. Wing fully developed. Genitalia as in Figs 52, 85.

Holotype ♂, **Papua New Guinea**: Morobe District, Arabuka, 1500–2000 m, 7.i.1968 (*J. & M. Sedlacek*) (BPBM).

Paratypes. 2 ♀, same data as holotype (BPBM, BMNH).

Comments. This species represents the *micropunctata*-group and is one of those defined in subgroup 1. The species described here to which it bears the closest affinity is *montana* from which it can be readily distinguished by the presence of a supracostal flange on the underside of the elytron.

Polysastra montana **sp. n.**

(Figs 53, 86, 129, Map 3)

General form. Length 10·0–13·1 mm. Elytra subparallel-sided, post-humeral sublateral depressions absent, setae extending well beyond margins of punctures, puncturation fine, dense and more or less uniform throughout; head, pronotum and scutellum densely and confusely punctured throughout. Head, antenna, pronotum and legs dark orange-brown to reddish brown, scutellum usually darker brown than pronotum, elytron either concolorous with pronotum or lighter yellowish to orange-brown, derm with a slight aeneous lustre; abdomen testaceous, rest of underside dark reddish to pitchy brown; setae pale golden.

Diagnosis. Head with frons flattened dorsally, post-antennal swellings with hind margins ill-defined, surface coarsely punctured with large shallow confluent punctures; surface of vertex irregular, area directly behind swellings coarsely and irregularly punctured, rest of area finely and densely punctured throughout, punctures not more than their own width apart, median area of vertex posterior to eyes with a shallow oblique, ovate admedian depression, derm strongly microsculptured throughout, setae long, fine and adpressed. Pronotum transverse, 1·7–1·8× as broad as long, sometimes slightly less in ♂, lateral tooth acute, width at tooth 1·2× greater than minimum posterior width, sublateral depressions present but shallow and ill-defined, puncturation fine and dense throughout, punctures not more than half their own width apart, sometimes indistinct due to strong microsculpture on derm, setae similar to those on vertex. Scutellum *c.* 1·4× longer than broad, weakly convex medially, finely and densely punctured throughout, derm strongly microsculptured, setae as on elytron. Elytron 4× as long as broad, width increasing very gradually from below humeral quarter to a maximum at about apical quarter, maximum width 1·2–3·0× greater than that at apex of scutellum, apex evenly rounded, underside of elytron with a small, shallow ovate pit just prior to apicosutural angle. Puncturation minute and more or less uniform throughout, punctures not more than their own width apart, derm microsculptured, setae adpressed, slightly shorter than those on pronotum. Underside finely and minutely punctured throughout, punctures not more than 1·5× their own width apart, those on metepisternum and adjacent area of metasternum becoming granulate, derm more strongly microsculptured in these areas, setae on disc of metasternum and centre of abdominal segments longer than those at sides. Legs with femora minutely punctured throughout, punctures 2–3× their own width apart, derm distinctly microsculptured, setae on lateral surfaces distinctly longer and finer than rest; tibiae granulate, setae short and stout. Genitalia as in Figs 53, 85.

Holotype ♂ (dissected), **Papua New Guinea**: Mt Dayman, Maneau Range, 2230 m, N. slope no. 4, 19.v.–19.vi.1953 (*G. M. Tate*) (AMNH).

Paratypes. **Papua New Guinea**: 2 ♂, 7 ♀, same data as holotype (1 ♂, 1 ♀ BMNH, rest AMNH); 1 ♀, Mt Suckling, Exp. Camp Mau 2, 1700 m, 2.vii.1972, black light (*T. L. Fenner*) (BMNH).

Comments. This species belongs to the *micropunctata*-group and represents those species of subgroup 1 that lack the supracostal flange on the underside of the elytron. The species described here to which it bears the closest affinity is *micropunctata* from which it can be readily distinguished by the absence of a supracostal flange on the underside of the elytra.

Polysastra obscuricornis (Blackburn) **comb. n.**

(Figs 71, 87, 121, Map 8)

Sastra obscuricornis Blackburn, 1896: 84. Holotype ♀, Australia: N. Qu[eensland], no. 6040 (BMNH) [examined].

Additional material examined

Australia: 65 examples, N. Queensland, various localities (Map 8) (ANIC, BMNH, MCZ, NMV, NR, SAM, UQ).

Comments. This species belongs to the *costatipennis*-group and is most closely related to *costatipennis*.

Plant associate. *Laportea* sp.

Polysastra purpurasco sp. n.

(Figs 73, 74, 90, 91, 124, 125, Map 2)

General form. Length 8·0–11·3 mm. Elytra subparallel-sided, post-humeral sublateral longitudinal depressions present, outer margins forming cariniform ridges which are joined at base of humeri; an irregularly developed ad-median carina present, running more or less parallel to inner margin of depression; median area of basal quarter convex; puncturation more or less uniform throughout, vestigial strial setae short and erect, rest of setae minute and confined within margins of punctures. Head and pronotum distinctly punctured. Head testaceous to pitchy black, pronotum testaceous to dull reddish brown, underside and femora testaceous to orange-brown, tibiae distinctly darker in colour than femora; elytron light reddish brown to pinkish purple or deep submetallic green, setae pale golden. Fully winged.

Diagnosis. Head with frons triangular, strongly convex medially, maximum elevation slightly greater than that of post-antennal swellings, post-antennal swellings not strongly convex, hind margins often ill-defined and confluent with vertex. Vertex irregularly punctured with large, shallow punctures which are mostly concentrated behind post-antennal swellings, confluent in places; derm weakly microsculptured with a vitreous lustre, setae short and fine, mostly adpressed. Pronotum transverse, on average 2·1× broader than long, lateral tooth not well developed, apex rounded, width at tooth 1·2× greater than minimum posterior width. Dorsal depressions distinct, puncturation dense and irregular, average puncture size more or less equal to largest on vertex, often indistinct due to vitreous lustre of derm; setae minute, decumbent. Scutellum with maximum width more or less equal to length, apex rounded, derm microsculptured with small shallow irregular punctures, setae minute, decumbent. Elytron on average 3·7× longer than broad, width increasing gradually from humerus to a maximum around middle, maximum width 1·2× greater than width at apex of scutellum; cariniform margins of post-humeral sublateral depression present from base of humeral angle, where they are joined, to apical quarter where they become obsolete, carinae more or less parallel and separated by the width occupied by *c.* 6–7 punctures, an irregularly developed ad-median carina present, running more or less parallel to inner margin of depression and becoming obsolete in apical quarter, width between ad-median carinae and inner marginal ridge slightly less than *c.* width of 5 punctures, area on basal quarter between ad-median carina and sutural margin convex, puncturation more or less uniform throughout, slightly coarser on basal quarter, punctures slightly smaller than those on pronotum, 0·5–0·15× their own width apart, derm smooth and shining. Underside finely and densely punctured throughout, punctures on metasternum 3–4× their own width apart, becoming slightly denser along lateral margins; derm smooth and shining, setae short, fine, decumbent, becoming adpressed along margins; metepisternum strongly microsculptured, punctures dense, 1·0–1·5× their own width apart, setae short and adpressed. Abdomen minutely punctured, punctures 3–4× their own width apart, derm weakly microsculptured, setae very fine, longer than on metasternum, particularly at sides, femora finely punctured with small shallow punctures 3–4× their own width apart on basal three-quarters, dense at apices, setae long fine and adpressed; tibiae finely granulate, setae becoming shorter and more erect towards apices.

Comments. This species belongs to the *costatipennis*-group and is mostly closely related to *obscuricornis*, having the same type of facies and aedeagus; apart from genitalia and coloration it differs principally by having the elytral margins less explanate and the carinae better developed, and the elytra are also slightly less densely punctured. For genitalic differences see Figs 71, 73. *P. purpurasco* also bears close affinity to *fuscitarsis*.

Polysastra purpurasco purpurasco subsp. n.

(Figs 73, 90, 124, Map 2)

Length 8·0–11·0 mm. Head, basal segments of antenna and scutellum pale testaceous to dull yellowish brown; elytra light reddish brown to deep pinkish purple, mature specimens with a deep bluish purple lustre over humeral area and sublateral depression. Underside testaceous, abdomen often dull orange-brown, femora testaceous to brownish yellow, apices of femora and rest of legs dark reddish brown. Head and pronotum moderately to densely punctured. General form slightly less robust than island subspecies. Genitalia as in Figs 73, 90.

Holotype ♂, **Papua New Guinea**: Wau, Morobe District, Hospital Creek, 1200 m, i.1965 (*J. Sedlacek*) (BMNH).

Paratypes. **Papua New Guinea**: 4 ♂, 8 ♀, same data as holotype (2 ♀, 3 ♀ BMNH); 2 ♀, Wau, 1050 m, 4.xi.1961; 1 ♂, Wau, 1150 m, 12.ix.1961 (all *J. Sedlacek*); 1 ♀, Wau, 1200–1300 m, 23.xii.1961 (*G. Monteith*); 3 ♂, 2 ♀, Wau, 1200 m, 13.viii.–14.x.1961 (*J. Sedlacek*); 4 ♂, 4 ♀, Wau, 1200 m, light-trap, 14.vi.–22.x.1961; 2 ♂, 7 ♀, Wau, 1200 m, m.v. light-trap, 11.x.–25.xi.1961 (all *J. J. & M. Sedlacek*) (2 ♂, 3 ♀ BMNH); 1 ♀, Wau, 1700–1800 m, 17.xi.1961; 1 ♂, 5 ♀, Wau, 1200 m, 1.v.–10.x.1962; 1 ♂, 4 ♀, Wau, 1200 m, light-trap, 16.ii.–15.vii.1962; 1 ♂, 2 ♀, Wau, 1200 m, m.v. light-trap, 2.x., 28.xii.1962; 7 ♀, Wau, 1250 m, 5.i.1963, m.v. light-trap (2 ♀ BMNH); 1 ♀, Wau, 1200 m, 5.x.1962, Malaise trap; 4 ♂, 2 ♀, 1250 m, 14.i., 21.i.1963 (1 ♂, 1 ♀ BMNH); 2 ♂, 9 ♀, Wau, 1200 m, m.v. light-trap, 4.i.–23.x.1963 (1 ♂, 2 ♀ BMNH); 6 ♀, Wau, 1200–1250 m, 4.ii.–19.viii.1964 (all *J. Sedlacek*); 3 ♂, 3 ♀, 1200 m, 26.iii.–30.vii.1964 (*J. & J. Sedlacek*); 3 ♂, 12 ♀, same data except m.v. light-trap (2 ♀ BMNH); 1 ♂, Wau, 1200–1300 m, 22.x.1965 1 ♀, Wau, 1700–1800 m, 27.ix.1965; 1 ♂, Wau, 1100–1300 m, 1.ii.1966 (all *J. Sedlacek*); 1 ♀, Wau, 1200 m, 25.viii.1966 (*G. A. Samuelson*); 1 ♀, Wau, 1200 m, iv.1966, light-trap (*J. L. Gressitt*); 2 ♂, Wau, 1200 m, 14.iii.1966 (*J. L. Gressitt & Wilkes*); 1 ♀, Wau, 1200 m, 26.iii.1966, light-trap (*J. L. Gressitt*) (BMNH); 2 ♂, Wau, 1200 m, 3.ii.1966 (*J. Sedlacek*); 1 ♀, Wau, 1200 m, 24.iii.1968, *Acalypha* sp. (*J. Sedlacek*); 1 ♂, Wau, 1200 m, i.1968 1 ♀, Wau, 8.ix.1968 (all *J. & M. Sedlacek*); 1 ♀, Wau, 1200 m, 28.i.1974, K 606, *Pipturus*; 1 ♂, 1200 m, 27.v.1974, at light (*A. D. Hart*) (*WEI*); 1 ♂, Wau, 1150 m, 6.iii.1974, beaten from *Coffea arabica* (*J. J. H. Szent-Ivany*); 1 ♂, Wau, 1200 m, 24.vii.1974, Myrtaceae, *Eugeni stipularis* (*G. Otaweto*) (WEI); 1 ♂, Wau, Wau Creek, 1200–1500 m, 28.iii.1963; 1 ♂, 6 km W. of Wau, Nami Creek, 1700 m, 12.vi.1962 (all *J. Sedlacek*); 1 ♂, Wau, Coviak Ridge, 763 m, 7.xii.1963 (*H.C.*); 1 ♀, 32 km SW. of Lae, 100 m, 23.iii.1963 (*J. Sedlacek*); 2 ♂, Garaina, 550–750 m, 16.i.1968; 1 ♂, Garaina-Saureli, 900–1400 m, 5.i.1968 (all *J. & M. Sedlacek*); 1 ♀, Karimui, 4.vi.1961, light-trap (*J. L. Gressitt*); 1 ♀, Kassam, 1350 m, 48 km E. of Kainantu, 7.xi.1959 (*T. C. Maa*); 1 ♂, Owen Stanley Range, Goilala-Loloipa, 16–30.xi.1958 (*W. W. Brandt*); 1 ♀, Tsenga, 1200 m, Upper Jimmi V, 15.vii.1955, light-trap (all *J. L. Gressitt*); 2 ♀, Finisterre Range, Saidor, Matoko village, 6–24.ix.1958 (*W. W. Brandt*); 1 ♀, Wau, 14.ii.1970 (OIP); 2 ♀, Gadsup, ix.1973 (all *H. Ohlmus*); 1 ♀, Popondetta area, 8–10.iv.1966 (*R. Rodzyork*), 25521; 1 ♂, Melambi River, Lae, Mirilunga village, 4500 m, 29.xii.1956 (*J. H. Ardley*), 19073; Kaparvia-Sangi, or Kododa, 600 m, 26.111. 1956 Curcuma; 1♂ 1 ♀, Wapenamanda School, 5700 ft, West Highlands, 21.iii.1960 (*J. H. Barrett*), 25596; 1 ♀, Luth, Mission Garden, Wau, 3500 ft, 2.vi.1957 (*J. J. H. Szent-Ivany*), 19050; 1 ♀, Bisianumu-Sogeri, Agri. Exp. Sta., 20.iii.1955 (*J. J. H. Szent-Ivany & A. Himson*), 19051 (all PNGDA); 1 ♂, 1 ♀, Madang Dist., Finisterre Mts, Budemu, *c.* 4000 ft, 15–24.x.1964 (BMNH); 4 ♀, Madang Dist., Finisterre Mts, Damanti, 3550 ft, 2–11.x.1964 (all *M. E. Bacchus*), 1 ♂, Kokoda, 1200 ft, ix.1933; 1 ♀, Mondo, 5000 ft, iii.1934 (all *L. E. Cheesman*) (all BMNH); 1 ♂, New Britain, Gazelle Pen., Gaulim, 130 m, 28.xi.1962 (*J. Sedlacek*). (All BPBM unless otherwise stated.)

PLANT ASSOCIATES. *Coffea arabica, Curcuma* sp., *Pipturus* sp., *Eugeni stipularis, Acalypha* sp.

***Polysastra purpurasco viridis* subsp. n.**

(Figs 74, 91, 125, Map 2)

Length 8·0–11·3 mm. Differs from the nominate mainland form as follows. Head deep reddish brown to pitchy black. Pronotum and scutellum opaque, testaceous, vitreous lustre lacking. Elytra dark submetallic green with a slight aeneous lustre, longitudinal area between lateral margin and carina formed by outer margin of sublateral depression bright reddish to orange-brown. Underside testaceous to brownish orange. Femora except for apices testaceous, apices and rest of legs pitchy brown. Head and pronotum tend to be more strongly and densely punctured than in nominate mainland form. No other obvious structural differences have been observed. Genitalia as in Figs 74, 91.

Holotype ♂ (dissected), **D'Entrecasteaux Islands**: Normanby I., Wakaiuna, Sewa Bay, 1–18.i.1957 (*W. W. Brandt*) (BPBM).

Paratypes. **D'Entrecasteaux Islands**: 2 ♀, same data as holotype (BPBM, BMNH); 3 ♀, Fergusson I., ix–xii.1894 (*A. S. Meek*) (MCZ); 1 ♀, Fergusson I., mountains between Agamoia and Ailuluai, 900 m, no. 4, 5–7.vi.1957 (*L. T. Brass*) (AMNH).

***Polysastra rugulosa* (Weise) comb. n.**

(Fig. 140)

Sastra rugulosa Weise, 1912: 438. Holotype ♀, NEW GUINEA: Erima (MNHU) [examined].

COMMENTS. This species belongs to the *irregularis*-group and is representative of subgroup 4.

Polysastra sedlaceki sp. n.

(Figs 64, 95, 137, Map 7)

General form. Length 11·0–15·0 mm. Elytra subparallel-sided, post-humeral sublateral depression present from base of humeri to just above apical quarter, outer margin of depressions forming a weak irregular ridge, surface of elytra weakly rugose with irregular smooth non-punctate raised areas, punctuation dense and irregular. Vertex and pronotum with large, shallow irregular punctures. Setae on elytron minute, majority confined within margins of punctures, few sparse long setae on intervals. Dorsum dull pinkish or reddish brown to deep purple-brown, outer margins of elytron often paler in colour, humeral area often with a slight greenish or pinkish lustre. Antenna and legs deep reddish to pitchy brown. Abdomen testaceous, rest of underside pitchy brown to black; basal three-quarters of femora often lighter in colour than rest of legs in male. Apices of elytron emarginate just before apico-sutural margin, more pronounced in female. Setae grey or pale golden. Fully winged.

Diagnosis. Head with frons evenly convex, sometimes somewhat flattened anteriorly, elevation less than that of post-antennal swellings. Post-antennal swellings distinctly elevated above level of vertex, margins well defined, lateral margins not contiguous with inner margins of eyes, surface microsculptured and sparsely punctured. Vertex irregularly punctured throughout with large, shallow, often confluent punctures, derm weakly microsculptured, median 'suture' distinct, setae long and fine. Pronotum transverse, on average 2·0× (♀), 1·8× (♂) broader than long, lateral tooth well developed and broadly rounded, width at tooth on average 1·2× greater than minimum posterior width, depressions shallow and poorly defined, puncturation irregular, size of punctures similar to those on vertex, punctures on average not more than half their own width apart, those at sides often confluent and usually larger than those on disc, derm microsculptured with a weak aeneous lustre, setae fine, mostly confined within margins of punctures. Scutellum 1·1× longer than broad, apex subtruncate, central area densely punctured with small shallow punctures, setae extending beyond margins of punctures. Elytron on average 3·8× longer than broad, width increasing gradually from base of humeral angles to a maximum at around apical quarter, maximum width 1·3× greater than that at apex of scutellum; elytral puncturation irregular due to rugosities, punctures, in groups, not more than their own width apart; size of elytral punctures less than that of the smallest punctures on pronotum, punctures on area around scutellum somewhat larger and coarser than rest, derm shining, raised areas weakly microsculptured. Underside finely and densely punctured throughout, metepisternum finely granulate, derm microsculptured, setae dense, punctures on posterior half of metasternum around median groove, 2·0–2·5× their own width apart, setae almost absent, derm smooth and shining, rest of surface densely punctured, those at sides less than their own width apart, derm distinctly microsculptured, setae dense, short and fine; punctures on abdominal segments not more than their own width apart, derm microsculptured, setae becoming slightly shorter and denser at sides, setae slightly stouter than those on metasternum; basal three-quarters of femora irregularly punctured with small shallow punctures up to 3× their own width apart, apical quarter densely punctured, punctures not more than their own width apart, microsculpture becoming stronger towards apices, lateral setae long, fine and adpressed, dorsal setae slightly shorter and stouter; tibiae finely granulate, setae becoming shorter and stouter towards apices. Genitalia as in Figs 64, 95.

Holotype ♂ (dissected), **Papua New Guinea**: Morobe Dist., Wau, 1200 m, 20–26.v.1962 (*J. Sedlacek*) (BPBM).

Paratypes. **Papua New Guinea**: 1 ♂, Wau, 1100–1300 m, 2.i.1966 (*J. Sedlacek*); 1 ♂, Wau, 1200 m, 1.ix.1961, light-trap (*J. Sedlacek*) (BMNH); 1 ♂, no. 10, Purosa Camp, Okapa area, 1950 m, ix–27–1959 (AMNH); 1 ♀, Owen Stanley Range, Goilala, Tapini, 975 m, 16–25.xi.1957 (*W. W. Brandt*); 1 ♀, same data except Tororo, 1560 m, 15–20.xi.1958; 1 ♀, Wau, 1050 m, 4.xi.1961 (*J. H. Sedlacek*) (BMNH); 1 ♀, Wau, 1200 m, 15.ix.1961, light-trap (*J. & M. Sedlacek*); 1 ♀, Wau, 1200 m, 4–7.i.1963, m.v. light-trap (*J. Sedlacek*) (BMNH); 1 ♀, same data except 29.viii.1963; 1 ♀, Wau, 1200 m, 16–17.viii.1964 (*J. Sedlacek*); 1 ♀, Wau, 1200–1300 m, 4.ix.1965 (*J. Sedlacek*); 1 ♀, same data except 15.viii.1965; 1 ♀, same data except 15.viii.1965; 1 ♀, same data except 1–9.ix.65 (BMNH); 1 ♀, Wau, 1200 m, 9.iii.1965 (*J. Sedlacek*); 1 ♀, Wau, 1200 m, 24.vii.1965 (*J. & M. Sedlacek*). (All BPBM unless otherwise stated.)

Comments. *P. sedlaceki* is representative of the *irregularis*-group and is related to *irregularis* and *duplicator*.

Polysastra suavis sp. n.

(Figs 54, 98, 131, Map 7)

General form. Length 9·8–12·0 mm. Elytra pyriform, post-humeral sublateral depressions weak, outer margin of depression forming an irregular ridge, inner margin indicated by a short sinuate ridge just below basal quarter, puncturation dense and irregular, setae confined within margins of punctures, 'strial' setae on interspaces short and erect. Head and pronotum indistinctly punctured. Head deep reddish brown to black, pronotum and scutellum either concolorous with head or light reddish brown. Elytron dark metallic green with a weak aeneous lustre, or deep metallic blue with a purplish lustre. Underside and femora either brownish orange or with metasternites and legs pitchy brown to black. Abdomen testaceous; setae pale golden. Fully winged.

Diagnosis. Head with frons convex, maximum elevation equal to that of post-antennal swellings, post-antennal swellings convex, margins distinct, hind and lateral margins oblique, anterior outer angle contiguous with inner margin of eye, derm smooth and shining, vertex with large, shallow irregular punctures surrounding a central, slightly raised impuctate area, derm microsculptured, setae long and fine, confined to punctate areas. Pronotum on average 1·8× broader than long, lateral tooth broad and weakly developed, width at tooth 1·0× greater than minimum posterior width, lateral depressions shallow but distinct, median depressions well defined, linked by a narrow longitudinal groove, posterior depression almost circular, puncturation shallow and indistinct due to vitreous lustre, punctures 1·0–1·5× their own width apart, derm weakly microsculptured, setae minute and decumbent. Scutellum more or less as broad as long, apex rounded, minutely punctured, setae adpressed, extending beyond margins of punctures. Elytron slightly explanate at side, on average 3·1× longer than broad, maximum width 1·5× greater than width at apex of scutellum, apices evenly rounded; basal quarter between humeri and sutural margin, delimited laterally and posteriorly by shallow depressions, median area of elytron weakly convex; post-humeral sublateral longitudinal depression shallow, outer margins forming an irregularly developed ridge from humeri to apical quarter, inner margin only partially indicated by a very short sinuate ridge just below basal convexity, lateral margins weakly explanate from below humeral angles to just above apical quarter, punctures 1–2× their own width apart, shallow and indistinct in places, derm weakly and irregularly punctured. Underside finely punctured throughout, metepisternum minutely punctured, punctures 2·5–3·0× their own width apart, derm microsculptured, setae long and adpressed, adjacent area of metasternum weakly alutaceus with minute punctures 2–3× their own width apart, setae long and decumbent, slightly finer than those on metepisternum; abdomen minutely punctured, punctures 5–6× their own width apart, derm weakly microreticulate, setae very fine, length of those in centre of segments more or less equal to longest on metasternum, those at sides shorter, decumbent or suberect, femora except for apices minutely punctured, punctures 5–6× their own width apart, dense at apex, derm strongly microsculptured at apex, setae long, fine and adpressed, short at apices. Tibiae granulate, setae shorter, stouter and suberect. Genitalia as in Figs 54, 98.

Holotype ♂ (dissected), **Papua New Guinea**: Morobe district, Wau, 1300 m, 22.xii.1961 (*J. & J. H. Sedlacek*) (BPBM).

Paratypes. **Papua New Guinea**: 1 ♂, Wau, 1450 m, 6.ii.1963 (*J. Sedlacek*) (BMNH); 1 ♂, 1 ♀, Finisterre Range, Saidor, Matoko Village, 6–24.ix.1958 (*W. W. Brandt*) (1 ♀ BMNH); 2 ♀ Finisterre Range, Saidor, Kambavi Village, 1–28.viii.1958 (*W. W. Brandt*) (1 ♀ BMNH); 1 ♀, Wau, 1450 m, 20.xii.1961 (*J. & M. Sedlacek*); 1 ♀, Mt Kaindi, 2350 m, 23.iii.1966, light-trap (*J. L. Gressitt*); 1 ♀, Wau, Kunai Creek, 1270 m, 22.viii.1963 (*J. Sedlacek*) (BPBM); 1 ♀, Finisterre Mts, Budemu, *c.* 4000 ft, 15–24.x.1964 (*M. E. Bacchus*) (BMNH).

Comments. *P. suavis* is representative of the *metallica*-group. The species included here to which it bears the closest affinity is *metallica* (see specific key for distinguishing characters, p. 225).

Polysastra varia sp. n.

(Figs 58–60, 100, 101, 146–148, Map 6)

General form. Length 8·5–12·0 mm. Elytra subparallel-sided, margins of post-humeral sublateral longitudinal depressions forming cariniform ridges, puncturation confused, dense throughout, setae minute, confined within margins of punctures. Head and pronotum with irregular, shallow, distinct puncturation. Coloration variable, specimens from the Huon Peninsula and the south-east have the elytron varying from light pinkish brown to deep purple with a deep blue or green submetallic lustre on humeral area, which may extend over whole elytra in darker specimens. Teneral specimens light orange-brown with a slight green lustre on humeral area; head, pronotum and scutellum testaceous to orange-red, underside usually pale testaceous; antenna, tibiae and tarsi either concolorous with pronotum or dark reddish brown. Specimens from the NE. highland areas (Aiyura) have the elytron dark metallic green with dark brown lateral margins, the abdomen testaceous and the rest of the body black. All specimens seen from north-east of the Huon region, including Japen I., have the elytron bright metallic green with a brassy lustre, the head, pronotum, scutellum and femora deep orange to reddish orange; underside testaceous to light yellowish orange, antennal segments and tibiae usually darker in colour than femora. No distinct morphological differences were noted between the colour forms. Size tends to be very variable within populations.

DIAGNOSIS. Head with frons entirely depressed to weakly concave. Vertex irregularly punctured, punctures large and shallow, confluent in places, average size slightly larger than largest pronotal punctures, derm surrounding punctures weakly microsculptured, rest smooth and shining, majority of setae confined within margins of punctures; post-antennal swellings elevated above level of vertex, hind margins ill-defined, derm almost impunctate. Pronotum transverse, *c.* 1·7–1·8× (♂) and *c.* 1·9–2·0× (♀) broader than long. Lateral tooth weakly developed, width at tooth *c.* 0·75× greater than minimum posterior width; punctures shallow, concentrated in and around sublateral depressions where they may become confluent, size variable, largest more or less equal to those on adjacent area of elytron, punctures 1·0–1·2× their own width apart, derm smooth and shining, weakly microsculptured around punctured areas. Scutellum weakly convex, punctures minute, 3–4× their own width apart, setae distinct, extending beyond margins of punctures, derm microreticulate. Elytron on average 3·3× longer than broad, maximum width at level more or less equal to that of second abdominal segment, width at this point *c.* 1·3× greater than that at level of apex of scutellum. Outer cariniform margin of post-humeral sublateral longitudinal depression distinct to apical quarter, inner cariniform margin indistinct until it converges with outer margin at a level more or less equal to that of apex of metepisternum, continuing till apical quarter where it becomes obsolete, width between carinae decreasing slightly towards apical quarter, a third, weakly developed admedian carina sometimes present, particularly in female, running more or less parallel to inner adlateral carina and becoming obsolete in apical quarter, linked to inner adlateral carina by a short, oblique, irregular convexity just below convergence of inner and outer carinae. Puncturation of elytron confused, density more or less uniform throughout, punctures 1·1–1·2× their own width apart, basal third sometimes slightly more coarsely punctured than rest of derm, particularly around scutellum and on humerus, derm weakly microsculptured, sometimes few sparse erect setae on intervals. Ventral surfaces minutely punctured throughout, metasternum convex, punctures 2·0–2·5× their own width apart, setae long, pale golden, derm smooth and shining; metepisternum distinctly microsculptured, punctures shallow, distinctly larger than those on metasternum, *c.* 0·5–1·0× their own width apart. Setae similar to those on sides of metasternum. Punctures on abdomen 2–3× their own width apart, derm weakly microsculptured, setae slightly longer than those on disc of metasternum. Legs with basal three-quarters of femora minutely punctured, punctures 2·0–2·5× their own width apart, apical quarter slightly more densely and coarsely punctured, derm microsculptured, setae long and appressed. Tibiae granulate, setae becoming shorter and denser towards apices. Fully winged. Genitalia as in Figs 58–60, 100, 101.

Holotype ♂, **Papua New Guinea**: Morobe District, Wau, 1200 m, 17.viii.1961, light-trap (*J. & M. Sedlacek*) (BPBM).

Paratypes. **Papua New Guinea**: 1 ♀, same data as holotype (BPBM); 12 ♂, 9 ♀, Morobe District, Wau, 1200–1300 m, 9.vii.–20.xi.1961, light- or Malaise trap (6 ♂, 3 ♀ BMNH); 1 ♂, 8 ♀, Wau, 1200 m, 11.iii.–10.x.1962, light- or Malaise trap (5 ♀ BMNH); 6 ♀, Wau, 1200 m, 21.i.–29.viii.1963, light- or Malaise trap (all *J. & M. Sedlacek*); 1 ♂, Wau, 1200 m, 23.x.1963, m.v. light-trap (*J. L. Gressitt*); 2 ♂, 7 ♀, Wau, 1200 m, 3.iv.–16.ix.1964, light-trap (*J. & M. Sedlacek*) (1 ♂, 2 ♀ BMNH); 1 ♀, Wau, no. 1187, 4000 ft, 21.x.1965 (*A. H. Kistner*); 1 ♀, Wau, Big Wau Creek, 1200 m, xii.1965, Malaise trap (*J. Sedlacek*); 1 ♂, Wau, 1200 m, 22.ii.1966 (*J. & M. Sedlacek*); 1 ♀, Wau, 7.iii.1970 (*H. Olmus*); 1 ♀, Lae, 17.vii.1970 (*H. Olmus*) (OIP); 1 ♀, Karimui, 3.vi.1961, light-trap (*J. L. & M. Gressitt*); 1 ♂, 1 ♀, Owen Stanley Range, Goilala, Loloipa, 11.–20.xii.1957; 1 ♀, Owen Stanley Range, Goilala, Tapini, 975 m, 16–25.xi.1957 (all *W. W. Brandt*); 2 ♂, Huon Peninsula, Pindu, 20.iv.1963 (*J. Sedlacek*); 1 ♀, Finisterre Range, Saidor, Sibong Village, 6–16.vi.1958 (*W. W. Brandt*); 3 ♂, Finisterre Mts, Madant District, Damanti, 3550 ft, 2–11.x.1964 (*M. E. Bacchus*) (BMNH); 6 ♀, Torricelli Mts, Mokai Village, 750 m, 8–15.xii.1958 (2 BMNH); 1 ♀, Torricelli Mts, Mobitei, 750 m, 5–15.iii.1959 (all *W. W. Brandt*); 1 ♂, 1 ♀, Hollandia, 300–600 m, i.1937 (*W. Stuber*) (BMNH); 1 ♀, Guega, W. of Swart Valley, 1200 m, 15.xi.1958; 1 ♂, Upper Jimmi Valley, 1000 m, 13.vii.1955; 1 ♀, Upper Jimmi Valley, 1300 m, Korop, 12.vii.1955 (all *J. L. Gressitt*); 1 ♀, 19002, Menyama, 4.i.1960 (*J. H. Ardley*); 1 ♀, 19059 N. Papua, Sangara Estate, 6.viii.1958, at rest on cacoa tree (*J. J. H. Szent-Ivany*) (DPI); 1 ♀, 2219, Afore, Boikik Plantation, 18.xii.1974 (*E. S. C. Smith*) ex cardomom (BMHN); 1 ♂, Aiyura, 25524, 5400 ft, 21.ii.1959, regrowth area; 2 ♂, 19043, 19008, Aiyura, 5400 ft, at light (no. 19008 BMNH); 1 ♂, 1 ♀, Aiyura, 6000 ft, 22.vii.1960, u.v. light; 1 ♀, 19054, Aiyura, i.ix.1960 (all *J. H. Barrett*) (DPI); 1 ♂, Garaina; 1 ♀, Goroka, ii.1975, at light (all *R. Hornabrook*) (RHW); 1 ♂, 2 ♀, Kainantu, 1650 m, 20–26.x.1959, m.v. light (*T. Maa*) (1 ♀ BMNH). (All specimens BPBM unless otherwise stated.)

COMMENTS. *P. varia* is representative of the *varia*-group. The species described here to which it bears the closest affinity is *venusta*; superficially it is very similar to *purpurasco*. It appears to be one of the most variable species examined and exhibits geographical colour variation.

PLANT ASSOCIATES. *Theobroma cacao, Elettaria cardamomum, Coffea arabica.*

Polysastra venusta sp. n.

(Figs 61, 127, Map 5)

GENERAL FORM. Length 8·0–10·0 mm. Elytra subparallel-sided, post-humeral sublateral longitudinal depression present, outer margins forming distinct ridges which are joined below humeri at a point level with middle of metasternum, outer ridge distinct from base of elytron to apical quarter, inner ridge becoming obsolete just above termination of outer ridge in apical quarter, a third longitudinal ridge is weakly indicated parallel to inner ridge, lateral separation equal to space occupied by five punctures, surface densely and regularly punctured throughout, pronotum almost impunctate, punctures shallow and ill-defined due to vitreous surface. Head testaceous to bright purplish red, pronotum either concolorous with head or slightly darker; elytron deep yellowish orange to purplish red, humeral area with a strong, dull, dark green submetallic lustre which extends posteriorly over sublateral depression in purplish specimens. Underside testaceous to orange, legs either entirely testaceous to yellowish brown or with tibiae and tarsi pitchy brown. Majority of elytral setae confined within margins of punctures, interspersed with a few long, erect setae on interspaces. Fully winged.

DIAGNOSIS. Head with frons completely depressed anteriorly. Post-antennal swellings distinct from vertex, posterior margins rounded, anterior outer angle contiguous with inner margin of eye; vertex irregularly punctured with moderately large shallow punctures, majority situated around middle of vertex, derm weakly microsculptured, setae very fine and adpressed, median 'suture' distinct. Pronotum transverse, on average 1·9× broader than long, lateral tooth not well developed, apex subacute, width at tooth 1·1× greater than minimum posterior width, depressions shallow and ill-defined, puncturation sparse, indistinct due to vitreous surface of derm, punctures shallow, similar in size to those on vertex, majority situated along anterior margin, setae very small and fine. Scutellum triangular, length more or less equal to maximum width, derm weakly microsculptured, punctures minute, setae short and fine. Elytron on average 3·3× longer than broad, width increasing gradually from base of humeral angles, reaching a maximum in apical quarter, maximum width 1·3× greater than that at apex of scutellum, puncturation more or less uniform throughout, punctures not more than their own width apart, slightly coarser in basal quarter, derm microsculptured. Underside finely and densely punctured throughout, punctures on metasternum 1·0–1·5× their own width apart, derm smooth and shining, becoming slightly microsculptured at sides, metepisternum distinctly microsculptured, puncturation tending to become granulate, setae fine and decumbent, punctures on abdominal segments minute, 2·0–2·5× their own width apart, derm shining, very finely microsculptured, setae very fine, slightly longer than those on metasternum, particularly towards middle of segments. Femora densely and finely punctured throughout, punctures not more than their own width apart, setae long, fine and adpressed, tibiae finely granulate, setae dense, stouter and more erect than on femora, density increasing towards apices. Genitalia as in Fig. 61.

Holotype ♂ (dissected), **Papua New Guinea:** Torricelli Mts, Wantipi, vill[age], 30.xi–8.xii.1958 (*W. W. Brandt*) (BPBM).

Paratypes. **Papua New Guinea:** 2 ♂, same data as holotype; 1 ♂, Kumur, Upper Jimmi V[alley], 1000 m, 13.vii.1955 (*J. L. Gressitt*); 1 ♂, 1 ♀, Humboldt Bay, Bewani Mts, 400 m, vii.1937 (*W. Stüber*) (BMNH).

COMMENTS. *P. venusta* is representative of the *varia*-group. The species described here to which it bears the closest affinity is *varia*.

SASTRA Baly

(Figs 1, 15, 42–49, 77–82, Maps 1, 9)

Sastra Baly, 1865: 253; Chapuis, 1875: 198, 206; Maulik, 1936: 254 (description based on species from Asia, transferred here to other genera); Gressitt & Kimoto, 1963: 404 (description based on single species incorrectly listed as Chinese due to data error). Type-species: *Sastra placida* Baly, by original designation.

Eriosardella Chujo, 1935: 219. Type-species: *Eriosardella costata* Chujo, by original designation. [Synonymized by Gressitt & Kimoto, 1963: 404.]

General form. Body elongate, elytra subparallel-sided (Fig. 1). Dorsum setose, elytron with sparse or dense, distinct setae throughout. Elytron more or less evenly convex, post-humeral sublateral longitudinal depression shallow to absent, derm more or less uniformly and densely punctured throughout. Length of antenna equal to at least three-quarters of body length, third segment at least 1·4× length of fourth segment and 2·0× that of second, all segments filiform, similar in both sexes. Eyes large and protuberant. Frons with sides distinctly convex, median area with a shallow depression or groove. Gena emarginate to eye. Pronotum either almost as broad as long or distinctly transverse, lateral margins evenly rounded in anterior half, maximum width not exceeding that of head plus eyes, distinctly less than that of elytra at humeri, primary setal pores distinctly tuberculate, dorsal depressions present, sublateral depressions shallow to well defined, each depression occupying at least two-thirds of area between disc and lateral margin, disc with a small anterior and posterior depression, anterior depression largest and usually better defined. Derm either with a vitreous reflection or dull without lustre, elytron very rarely metallic, sometimes a very weak submetallic lustre on humeral area in some species. Elytral epipleura present to at least apical quarter. Underside setose and finely punctured throughout. Fore coxal cavities open behind. Apex of abdomen in male with a deep triangular incision, evenly rounded in female. Legs slender, similar in both sexes, apices of tibiae with a comb-like row of short spines on the lateral edges, ventral spurs absent. Basal segment of fore tarsi in male slightly more enlarged than mid and hind, basal segment of fore and mid tarsi slightly shorter than length of segments 2 and 3 combined, basal segment of hind tarsus slightly longer than segments 2 and 3 combined. Claws distinctly bifid. Fully winged.

Diagnosis. Head with gena emarginate medially, emargination reaching anterior margin of eye (Fig. 15). Apical segment of maxillary palp conical, length slightly greater than that of preceding segment. Mandibles large and distinctly toothed. Labrum small and rounded anteriorly, not obscuring mandibles from above, width less than that of frons. Pseudoclypeus distinct, length not more than half that of labrum. Frons with sides distinctly convex, median area with a triangular depression or shallow groove extending from interantennal area, length not more than 1·5× that of antennal socket, anterior margin level with that of eyes. Eyes large and protuberant, length at least 3·5× that of antennal socket. Antennal sockets separated by less than width of a socket. Post-antennal swellings distinctly convex and elevated above level of vertex, confluent with frons between antennal sockets and delimited behind by a narrow horizontal groove. Vertex with a distinct coronal 'suture', derm either sparsely and indistinctly punctured or with an area of dense to confluent puncturation behind post-antennal swellings. Pronotum varying from almost as broad as long to distinctly transverse, maximum width and convexity in anterior half, lateral margins of anterior two-thirds evenly rounded, becoming straighter as pronotum narrows in posterior third, posterior margin sinuate, degree and density of puncturation variable, setae either sparse and indistinct or long and moderately dense, size and development of dorsal depressions variable. Elytron on average 3·4× longer than broad, surface more or less evenly convex (some species may have a very shallow transverse depression just behind humeral area and just above apical quarter), apices of elytra evenly rounded or with an apicosutural projection, maximum width in apical quarter. Underside minutely and densely punctured throughout, setae long and distinct, extending well beyond margins of punctures, metasternum convex with a narrow, shallow longitudinal groove, length at least 2·5× greater than that of mesosternum. Legs slender, length of hind leg plus tarsus slightly greater than that of elytron, fore and mid legs *c.* 1·5 mm shorter than hind leg, femora more or less of equal width, tibiae more or less straight, no sexual dimorphism, puncturation tending to become granulate towards apices, setae short and stout. Position in abdomen, and structure of male and female genitalia similar to that of *Polysastra*. Male aedeagus taking the form of a narrow tube, either with a spatulate apical region with a broad median orifice, or of fairly uniform width with a small median orifice and acute apex. Female genitalia very similar in structure to those of *Polysastra*, styli of similar, short rounded type.

Discussion. The present study shows that only nine of the 35 species included in *Sastra* by Wilcox (1971) were correctly assigned: these are listed below with their type-data. The remaining species that have not been assigned to new genera in this paper are listed (p. 256) with their new generic combinations.

Very little is known about the biology of *Sastra*. Specimens have been collected at various forms of light, including black light. An undescribed north Australian species was beaten from dead branches by Dr G. B. Monteith during the day, and another undescribed species from Afore, Papua New Guinea was collected on Cardamom. Apart from these records no other bionomic data are known for this genus.

All the species remaining in *Sastra* are from the New Guinea region. In addition to the nine listed below I have examined more than 34 undescribed species, all from the same area (Map 1), indicating that the genus is restricted to the region. *S. costata* Chujo, described from a single specimen which bears the locality 'China', appears to have been incorrectly labelled as all other specimens examined of this species are from Irian Jaya. Enquiries and examination of Chinese Galerucinae material has not revealed further alleged specimens of this species from China.

Species remaining in *Sastra*

Sastra beccarii Jacoby

(Figs 49, 82, 110, Map 9)

Sastra beccarii Jacoby, 1886: 76. Holotype ♀, IRIAN JAYA: Hatam, vi.1875 (*Beccari*) (MIZSU) [examined].

ADDITIONAL MATERIAL EXAMINED

Irian Jaya: 1 ♀, Etnabaai, 1904; 1 ♀, Heuvel Bivak, 750 m, xi.[19]09 (*Lorentz*) (ITZ); 1 ♀, Central Mts, Archbold Lake, 760 m, 26.xi–3.xii.1961 (BPBM).

Japen Island: 1 ♂, R. Manai-Undei, 500 ft, x.1938 (*L. E. Cheesman*); 2 ♀, Japen Camp 2, Mt Eiori, 2000 ft, ix.1938 (*L. E. Cheesman*) (BMNH).

Sastra costata (Chujo)

(Figs 43, 78, 105, 106, Map 9)

Eriosardella costata Chujo, 1935: 219. Holotype ♀, 'China': (*Kraatz*) (IP) [examined].
Sastra costata (Chujo) Gressitt & Kimoto, 1963: 404 [genera synonymized].

ADDITIONAL MATERIAL EXAMINED

New Guinea: 1 ♂, N[ew Guinea] (*Wallace*); 1 ♀, New Guinea; 1 ♀, 1 ♀ (*Wallace*); 1 ♀ (no data) (BMNH); 1 ♂, 1 ♀, Ramoi, 'ging 12' (*L. M. D'Albertis*); 1 ♀, same data plus iv.[18]73; 1 ♀, New Guin[ea] (MCZ).

Sastra depressa Weise

(Figs 46, 79, 107, Map 9)

Sastra depressa Weise, 1917: 208. LECTOTYPE ♀, IRIAN JAYA: Bivak Elland, i.[19]10 (*Lorentz*) (ITZ), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

Irian Jaya: 4 ♀ (paralectotypes), same data as lectotype (ITZ, MNHU) (1 ♀ without date); 1 ♂, 3 ♀ (paralectotypes), Noord River, ix.[19]09 (*Lorentz*) (ITZ, MNHU); 1 ♀, Noord Riv[er], 8.v.1907 (*Lorentz*) (ITZ). **Papua New Guinea**: 1 ♀, Fly River, x.ii.[18]95 (*L. M. D'Albertis*); 1 ♀, Paumomu Riv[er], ix–xii.[18]92 (*Loria*) (MCZ); 7 ♀, Karimui, 1080 m, 10–13.vii.1963 (*J. Sedlacek*); 1 ♀, same data except 1.v.1969; 1 ♀, Fly River, Oslobip, 100–600 m, viii.1969 (*J. Sedlacek*) (BPBM).

Sastra elegans Weise

(Figs 45, 104, Map 9)

Sastra elegans Weise, 1912: 437. Holotype ♂, IRIAN JAYA: Bivak Elland, x.[19]09 (*Lorentz*) (ITZ).

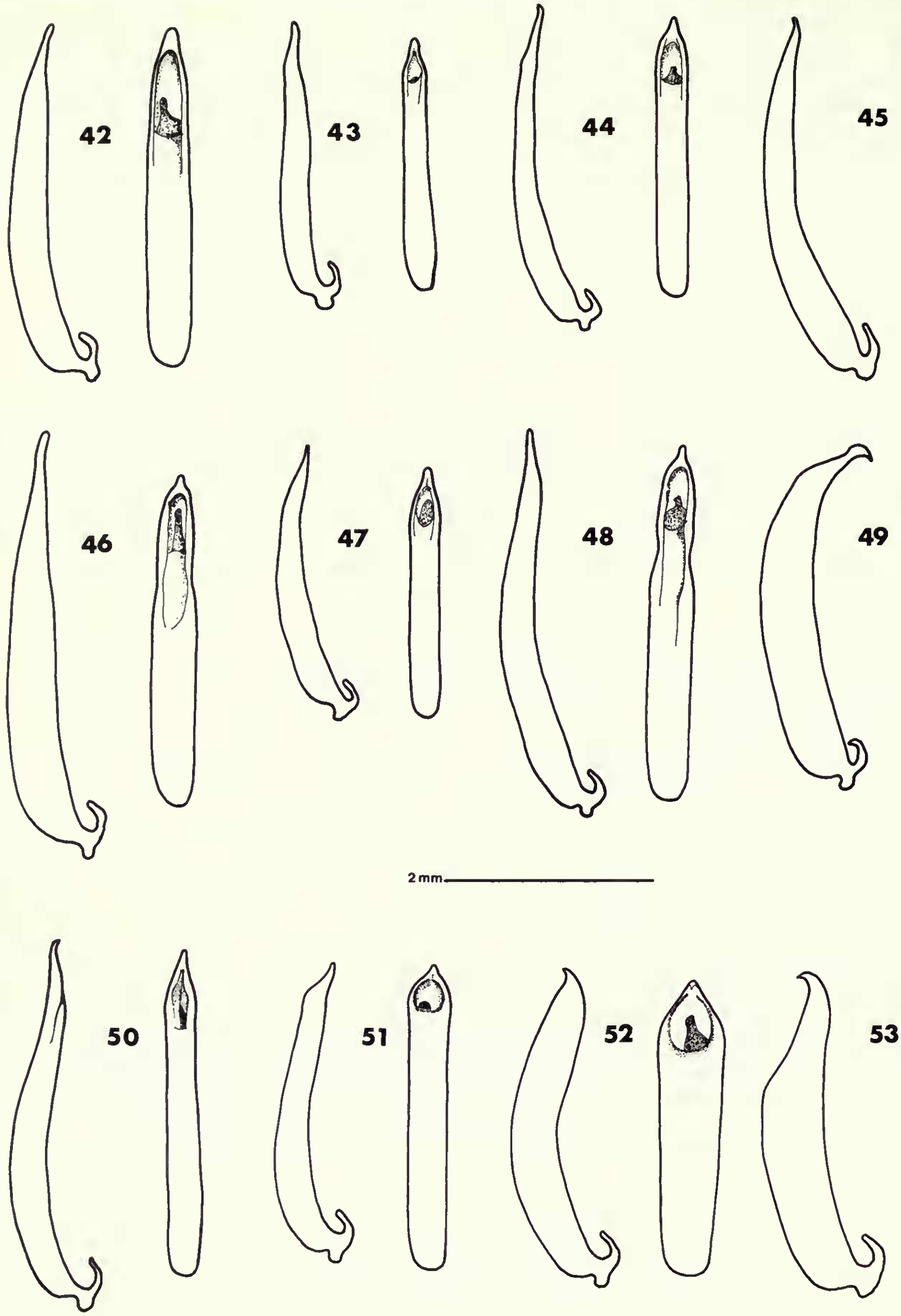
Sastra limbata Baly

(Figs 44, 111, 112, Map 9)

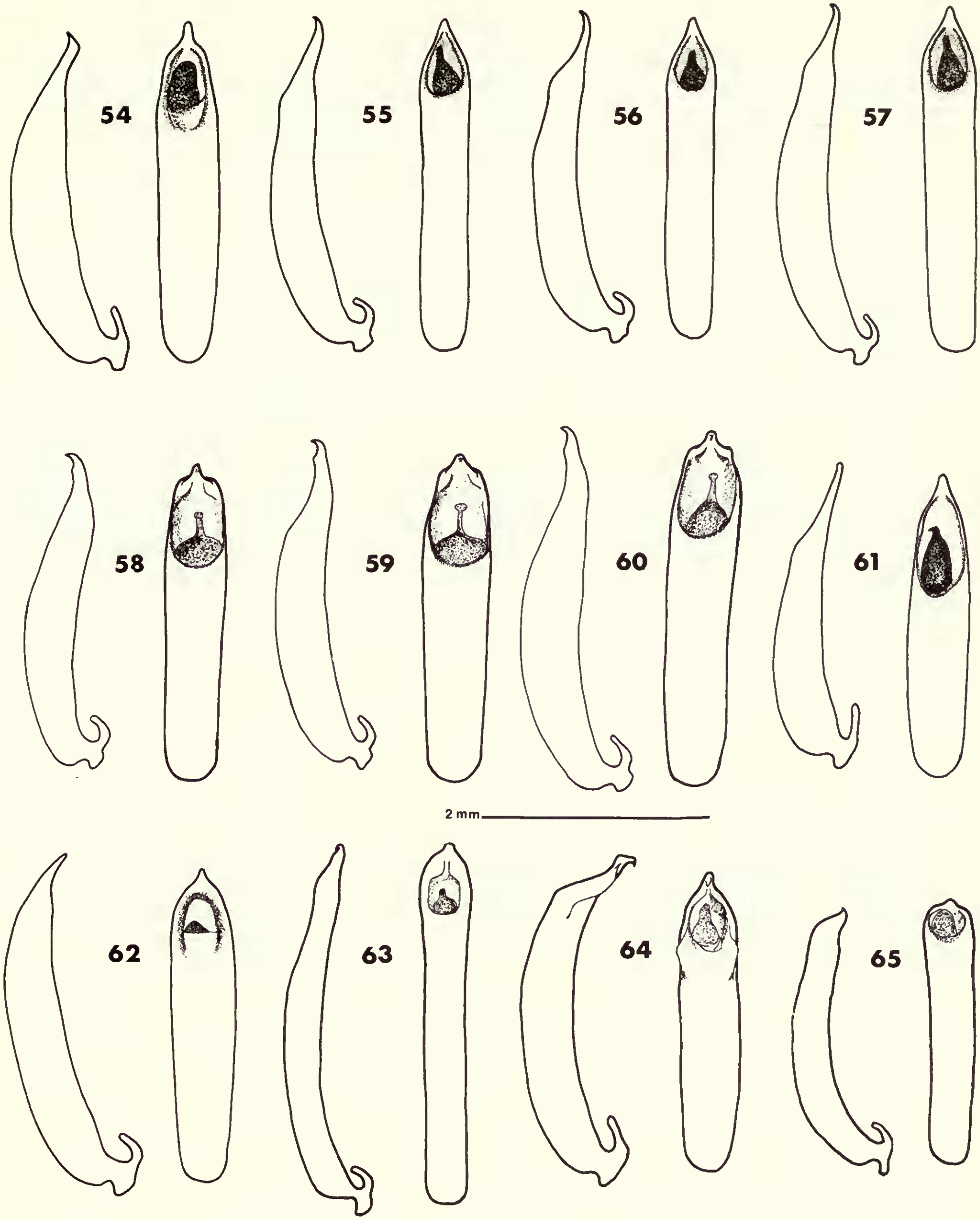
Sastra limbata Baly, 1865: 254. LECTOTYPE ♂, NEW GUINEA (*Wallace*) (BMNH), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

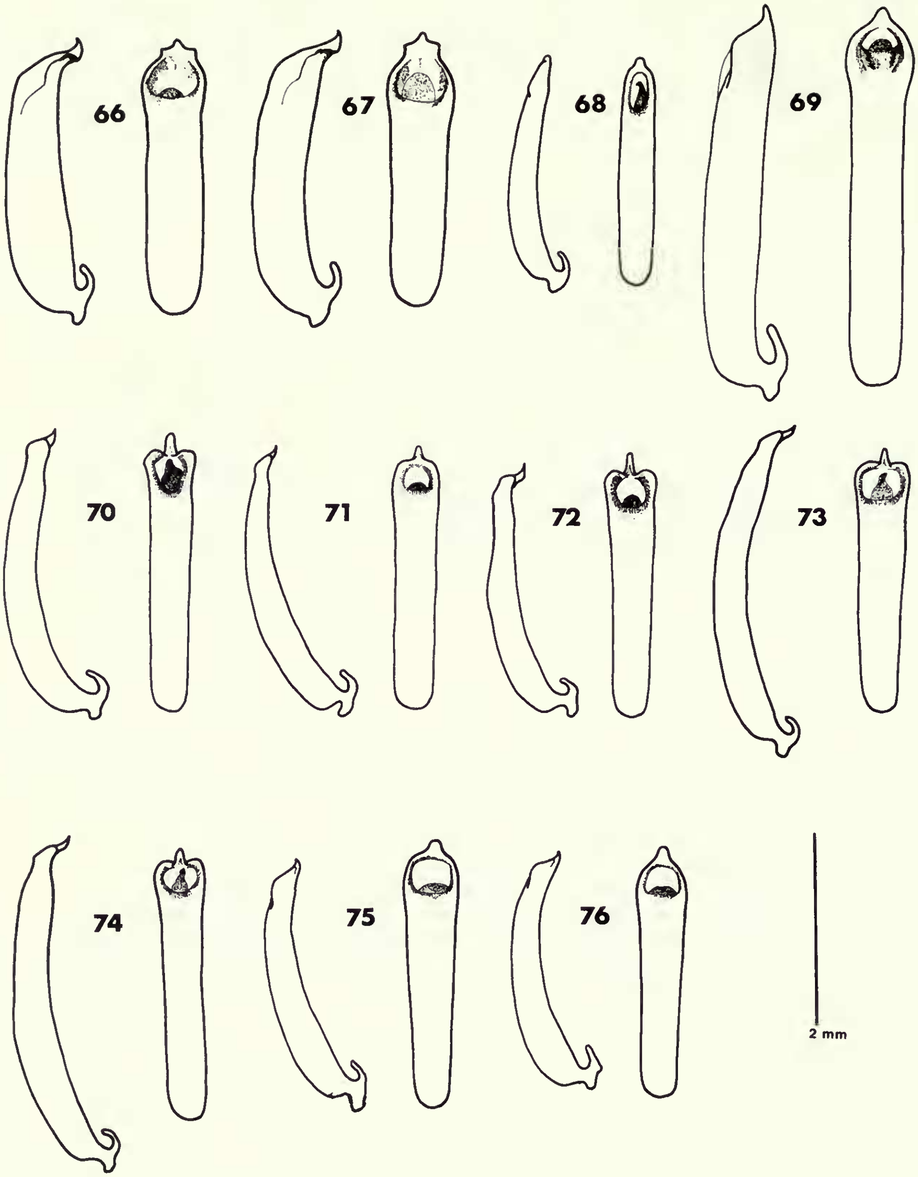
New Guinea: 2 ♂ (paralectotypes), same data as lectotype (BMNH).



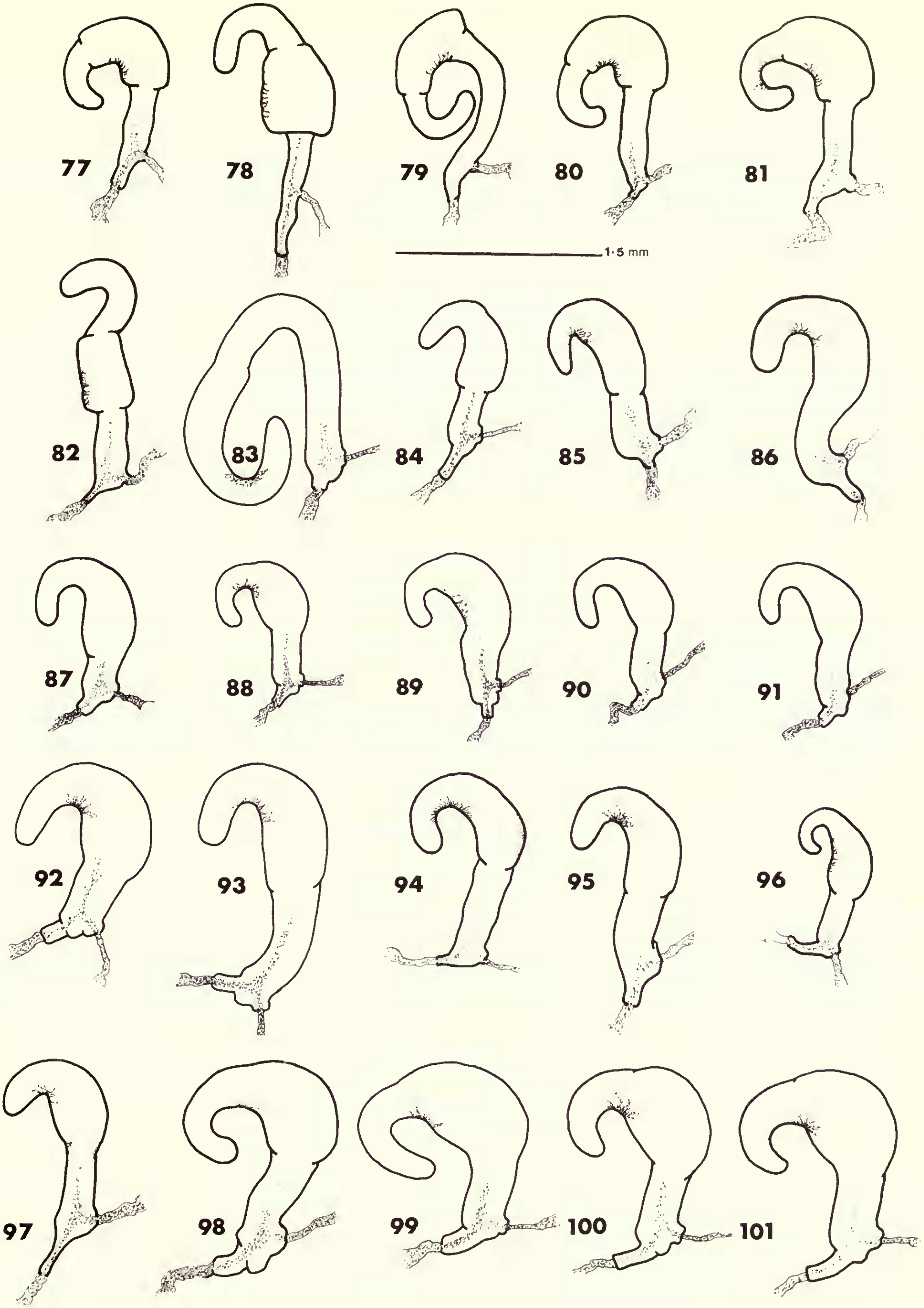
Figs 42–53 *Sastra* and *Polysastra*, aedeagi, dorsal and lateral view. 42, *Sastra olivacea*. 43, *S. costata*. 44, *S. limbata*. 45, *S. elegans*. 46, *S. depressa*. 47, *S. viridipennis*. 48, *S. rugicollis*. 49, *S. beccarii*. 50, *Polysastra abdominalis*. 51, *P. explanata*. 52, *P. micropunctata*. 53, *P. montana*.



Figs 54–65 *Polysastra,* aedeagi, dorsal and lateral view. 54, *P. sauvis.* 55, *P. metallica* (SE. form). 56, *metallica* (NW. form). 57, *P. metallica* (NE. form) (Map 7). 58, *P. varia* (P.N.G. form). 59, *P. varia* (NW.–NE. form). 60, *P. varia* (green highland form). 61, *P. venusta.* 62, *P. bicostata.* 63, *P. inhabilis.* 64, *P. sedlaceki.* 65, *P. duplicator.*



Figs 66–76 *Polysastra,* aedeagi, dorsal and lateral view. 66, *P. irregularis* (western form) (Map 5). 67, *P. irregularis* (eastern form). 68, *P. confusa*. 69, *P. fuscitarsis*. 70, *P. laetabilis*. 71, *P. obscuricornis*. 72, *P. costatipennis*. 73, *P. purpurasco purpurasco*. 74, *P. purpurasco viridis*. 75, *P. helleri* (NW. form). 76, *P. helleri* (NE. form) (Map 4).



Figs 77–101 *Sastra* and *Polysastra*, female spermathecae. 77, *Sastra placida*. 78, *S. costata*. 79, *S. depressa*. 80, *S. olivacea*. 81, *S. rugicollis*. 82, *S. beccarii*. 83, *Polysastra abdominalis*. 84, *P. explanata*. 85, *P. micropunctata*. 86, *P. montana*. 87, *P. obscuricornis*. 88, *P. costatipennis*. 89, *P. helleri*. 90, *P. purpurasco purpurasco*. 91, *P. purpurasco viridis*. 92, *P. fuscitarsis*. 93, *P. irregularis*. 94, *P. duplicator*. 95, *P. sedlaceki*. 96, *P. confusa*. 97, *P. inhabilis*. 98, *P. suavis*. 99, *P. metallica*. 100, *P. varia* (typical form). 101, *P. varia* (green highland form).

Sastra olivacea Jacoby

(Figs 42, 80, 109, Map 9)

Sastra olivacea Jacoby, 1904: 503. LECTOTYPE ♂, D'ENTRECASTEAUX ISLANDS: Fergusson Island (MCZ), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

D'Entrecasteaux Islands: 1 ♂, 2 ♀ (paralectotypes), same data as lectotype (BMNH, MCZ). **Trobriand Islands**: 1 ♂, 1 ♀, Kriwini Island, iii.v.[18]95 (*A. S. Meek*) (MCZ).

Sastra placida Baly **sp. rev.**

(Figs 77, 102, Map 9)

Sastra placida Baly, 1965: 254. Holotype ♀, MYSOL: (*Wallace*) (BMNH) [examined; abdomen missing]. [Synonymised with *Sastra viridipennis* Boisduval by Weise, 1917: 208.]

ADDITIONAL MATERIAL EXAMINED

Mysol: 1 ♀ (*Wallace*) (BMNH); 1 ♀, 'Malaya pen.' (MCZ).

Sastra rugicollis Jacoby

(Figs 48, 81, 108, Map 9)

Sastra rugicollis Jacoby, 1904: 502. LECTOTYPE ♀, TROBRIAND ISLANDS: (*Loria*) (BMNH), here designated [examined].

ADDITIONAL MATERIAL EXAMINED

Trobriand Island: 1 ♀ (paralectotype), same data as lectotype (BMNH). **D'Entrecasteaux Islands**: 2 ♂, 2 ♀, Ferguson Island, ix, x, xi, xii.[18]94 (*A. S. Meek*) (MCZ).

Sastra viridipennis (Boisduval)

(Figs 47, 103, Map 9)

Galleruca viridipennis Boisduval, 1835: 559. Holotype ♀, NEW GUINEA (*D. Lesson*) (MIZSU) [examined].

ADDITIONAL MATERIAL EXAMINED

Irian Jaya: 1 ♂, Dorey (*Wallace*); 4 ♀, Dorey (BMNH, 1 MCZ) 2 ♂, Andai, 1892 (*W. Doherty*) (MCZ).

Nomen dubium

Sastra suturalis Jacoby

(Fig. 113)

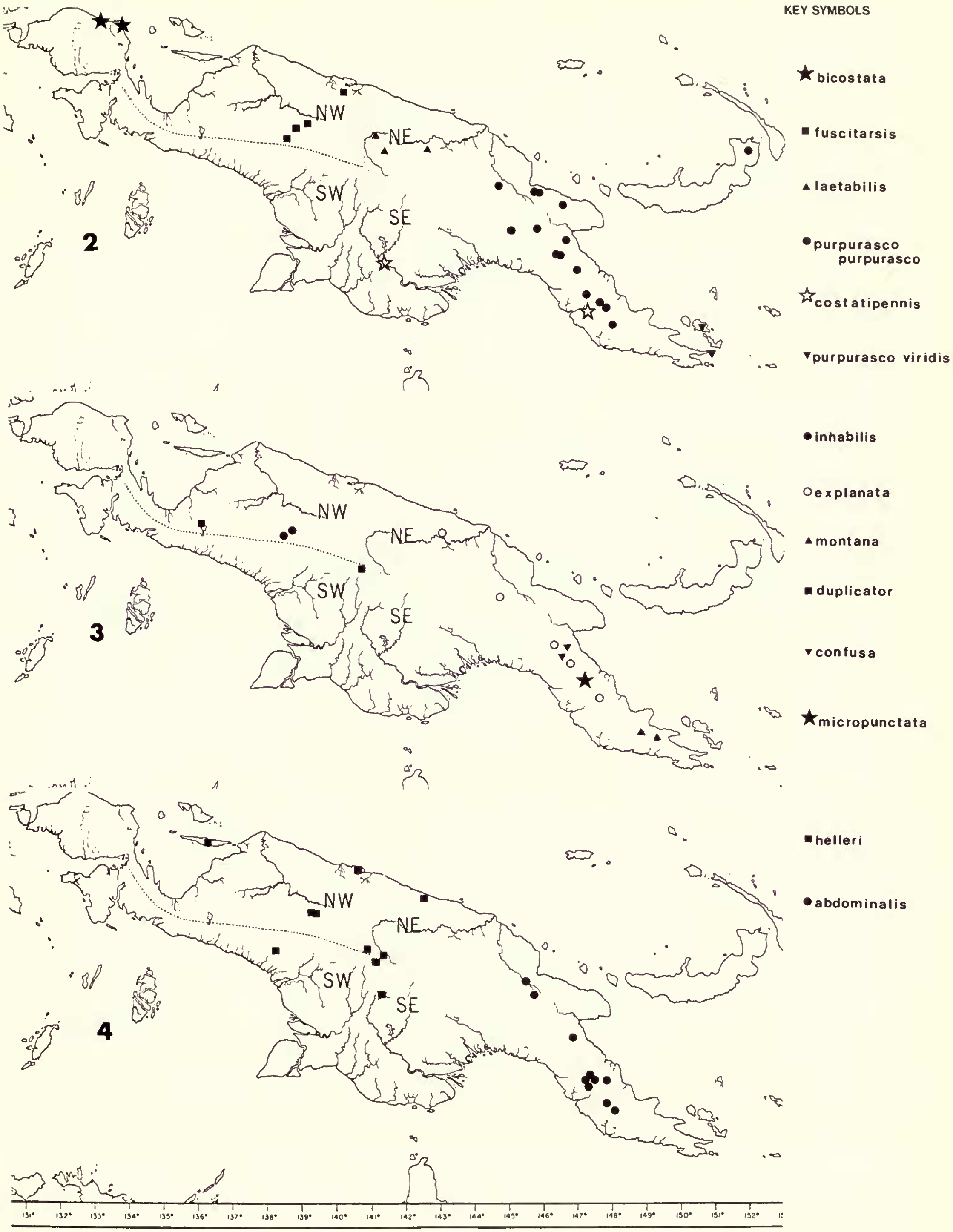
Sastra suturalis Jacoby, 1886: 75. ?Type ♀, AUSTRALIA (MCZ) [examined].

ADDITIONAL MATERIAL EXAMINED

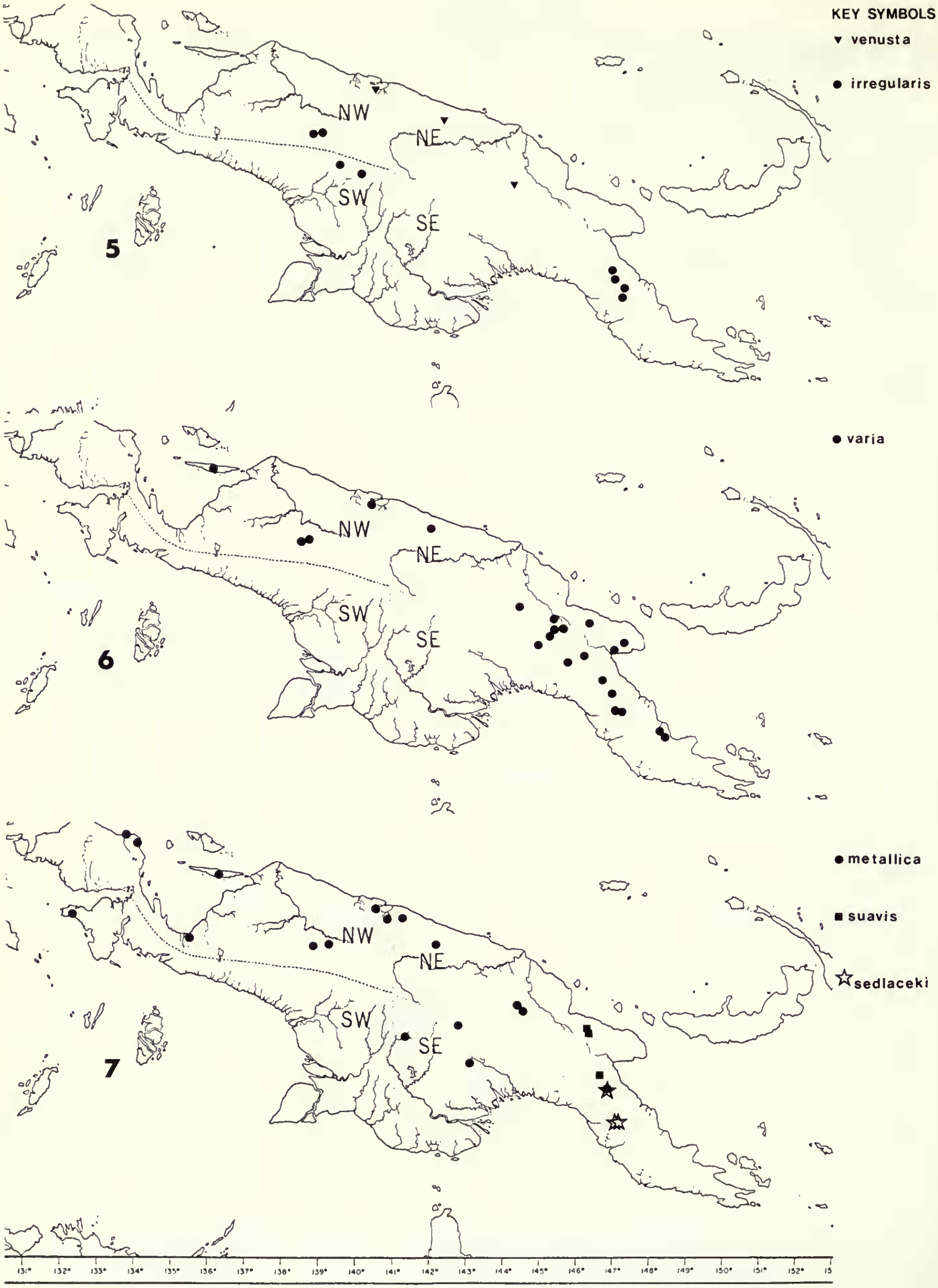
Australia: 2 ♀, Cooktown (BMNH).

COMMENTS. *S. suturalis* was described from Somerset, N. Queensland (*L. M. D'Albertis*). However the MCZ type-specimen labelled as being from the Jacoby collection bears no locality label or labels consistent with a D'Albertis specimen, and some uncertainty remains concerning its status.

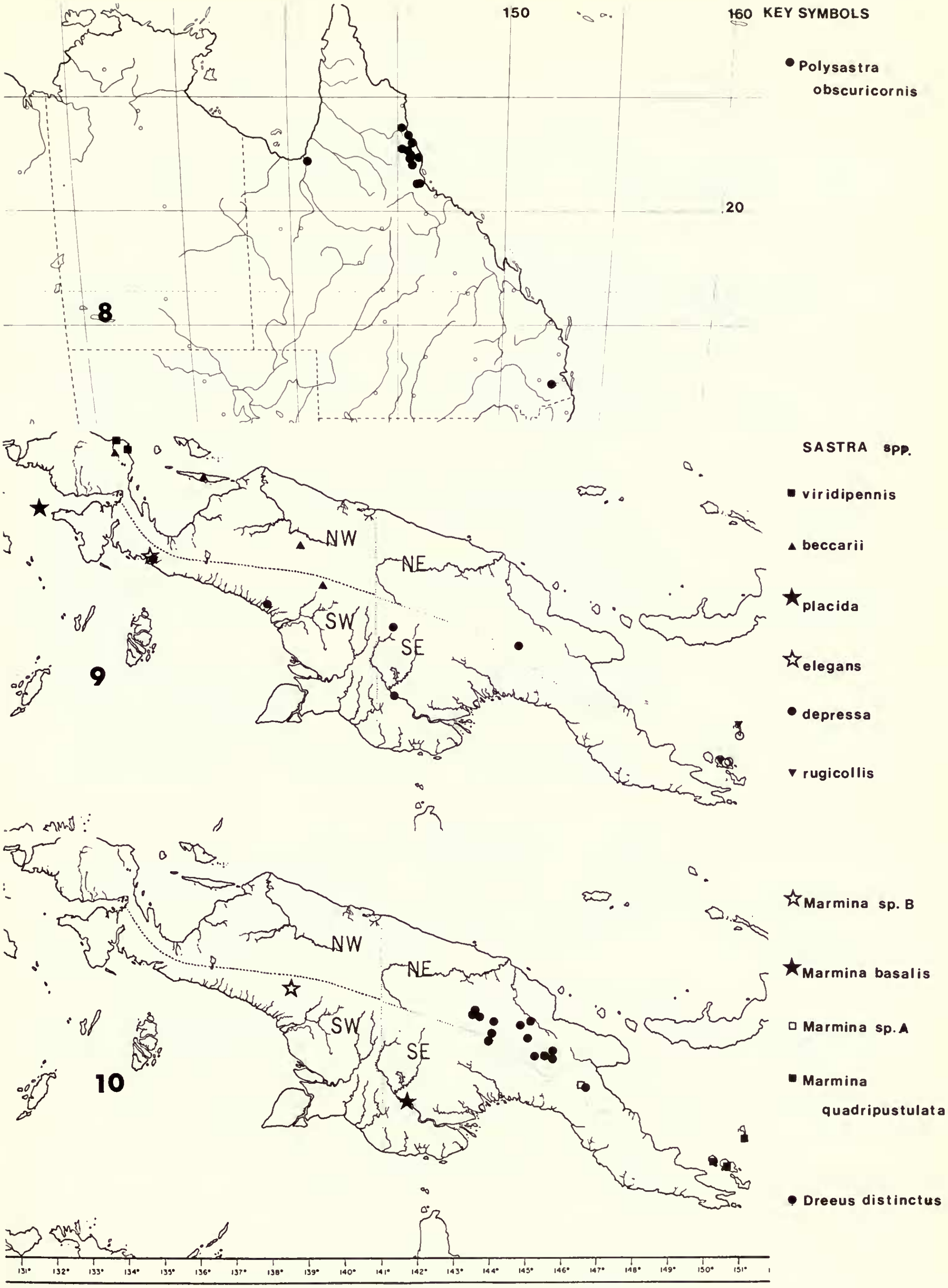
This species is provisionally retained in *Sastra* as it appears to belong to an undescribed genus near *Gallerucella*. No additional species congeneric with *suturalis* are known so it is not possible to establish the range of this genus.



Maps 2–4 Distribution of *Polysastra* species.



Maps 5–7 Distribution of *Polysastra* species.



Maps 8–10 Distribution of *Polysastra, Sastra, Marmina* and *Dreeus* species.

Species removed from *Sastra*

Coelocrania rubya (Maulik) **comb. n.**

Sastra rubya Maulik, 1936: 256. Holotype ♀, BURMA: Ruby mines (*Doherty*) (BMNH) [examined].

Galerucella ceylonensis Jacoby **comb. rev.**

Galerucella ceylonensis Jacoby, 1887: 105: 105. Syntypes, SRI LANKA: 1 ♂, Dikoya, 3800–4200 ft, 6.xii.[18]81–16.i.[18]82 (*G. Lewis*); 1 ♀, (*G. Lewis*); (BMNH) [examined].
Sastra ceylonensis (Jacoby) Maulik, 1936: 261.

Galerucella lateralis Jacoby **comb. rev.**

Galerucella lateralis Jacoby, 1887: 106. Holotype ♀, SRI LANKA: (*G. Lewis*) (BMNH) [examined].
Sastra lateralis (Jacoby) Maulik, 1936: 258.

Galerucella marginata Jacoby **comb. rev.**

Galerucella marginata Jacoby, 1887: 107. Holotype ♀, SRI LANKA: Bogawantalawa, 4900–5200 ft, 21.iii.–4.iv.[18]82 (*G. Lewis*) (BMNH) [examined].
Sastra marginata (Jacoby) Maulik, 1936: 260.

Galerucella rugosa (Jacoby) **comb. n.**

Sastra rugosa Jacoby, 1886: 71. Type ♂, SUMATRA: Singkara, x.1878 (*Beccari*) (MCZ) [examined].

Galerumaea flavomarginata (Jacoby) **comb. n.**

Sastra flavomarginata Jacoby, 1886: 74. Holotype ♀, NEW GUINEA: Fly River (*L. M. D'Albertis*) (MCSN) [examined].

Momaea fasciata (Jacoby) **comb. n.**

Sastra fasciata Jacoby, 1886: 77. Syntype ♀, NEW GUINEA: Ramoi, ii.1875 (*Beccari*) (MCZ) [examined].

Momaea meijerei (Weise) **comb. n.**

Sastra meijerei Weise, 1908: 320. Syntype ♀, NEW GUINEA: Jamur (MNHU) [examined].

Sastracella fulvicornis (Jacoby) **comb. n.**

Sastra fulvicornis Jacoby, 1892: 958. Holotype ♀, BURMA: Karen Mts (*Fea*) (MCSN) [examined].

Sastracella harmandi (Laboissière) **comb. n.**

Sastra harmandi Laboissière, 1932: 961. Holotype ♂, INDIA: Sikkim (*Harmand*) (MNHN) [examined].

Sastroides acutipennis (Laboissière) **comb. n.**

Sastra acutipennis Laboissière, 1932: 960. Syntype ♂, INDIA: Sikkim (*Harmand*) (MNHN) [examined].

Sastroides hirtipennis (Jacoby) **comb. n.**

Sastra hirtipennis Jacoby, 1891: 33. Holotype ♀, INDIA: Assam (BMNH) [examined].

Sastroides metallescens (Jacoby) **comb. n.**

Sastra metallescens Jacoby, 1894: 304. Holotype ♀, BURMA: Martapura, 1891 (*Doherty*) (MCZ) [examined].

Sastroides purpurascens (Hope) **comb. rev.**

Galleruca purpurascens Hope, 1831: 29. Holotype ♂, INDIA (BMNH) [examined].

Gastroides [sic] *purpurascens* (Hope) Bryant, 1923: 146.
Momaea purpurascens (Hope) Weise, 1924: 69.
Sastra purpurascens (Hope) Maulik, 1936: 267.
Sastroides purpurascens (Hope) Bryant, 1937: 101.
Sastra purpurascens (Hope) Wilcox, 1971: 52.

Yulenia discoidalis (Baly) **comb. n.**

Sastra discoidalis Baly, 1886: 35. Syntypes 1 ♂, 1 ♀, BORNEO: Sar[awak] (*Wallace*); 1 ♀, MALAYA: Sing[apore] (*Wallace*) (BMNH) [examined].

Check list of genera, species and subspecies treated here

- ***DREEUS*** **gen. n.**
  - ***distinctus*** **sp. n.**

- ***MARMINA*** **gen. n.**
  - ***basalis*** (Jacoby) **comb. n.**
  - ***quadripustulata*** (Jacoby) **comb. n.**

- ***POLYSASTRA*** **gen. n.**
  - ***abdominalis*** (Jacoby) **comb. n.**
  - ***bicostata*** (Jacoby) **comb. n.**
  - ***confusa*** **sp. n.**
  - ***costatipennis*** (Jacoby) **comb. n.**
  - ***duplicator*** **sp. n.**
  - ***explanata*** **sp. n.**
  - ***fuscitarsis*** **sp. n.**
  - ***helleri*** (Weise) **comb. n.**
  - ***inhabilis*** **sp. n.**
  - ***irregularis*** **sp. n.**
  - ***kampeni*** (Weise) **comb. n.**
  - ***laetabilis*** (Weise) **comb. n.**
  - ***metallica*** (Jacoby) **comb. n.**
    - *andaiensis* (Jacoby) **syn. n.**
  - ***micropunctata*** **sp. n.**
  - ***montana*** **sp. n.**
  - ***obscuricornis*** (Blackburn) **comb. n.**
  - ***purpurasco*** **sp. n.**
    - ***purpurasco purpurasco*** **subsp. n.**
    - ***purpurasco viridis*** **subsp. n.**
  - ***rugulosa*** (Weise) **comb. n.**
  - ***sedlaceki*** **sp. n.**
  - ***suavis*** **sp. n.**
  - ***varia*** **sp. n.**
  - ***venusta*** **sp. n.**

- ***SASTRA*** Baly
  - ***beccarii*** Jacoby
  - ***costata*** Chujo
  - ***depressa*** Weise
  - ***elegans*** Weise
  - ***limbata*** Baly
  - ***olivacea*** Jacoby
  - ***placida*** Baly **sp. rev.**
  - ***rugicollis*** Jacoby
  - ***viridipennis*** (Boisduval)

- Nomen dubium
  - ***suturalis*** Jacoby

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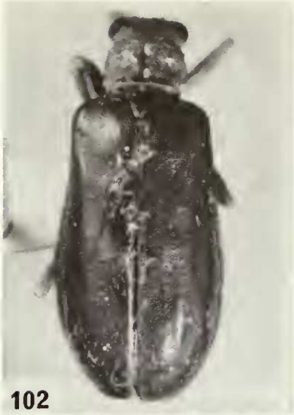
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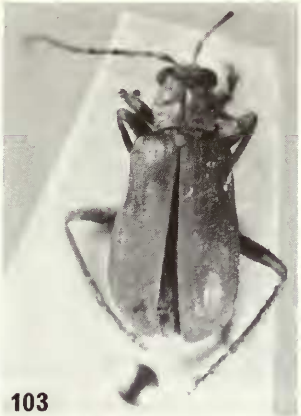
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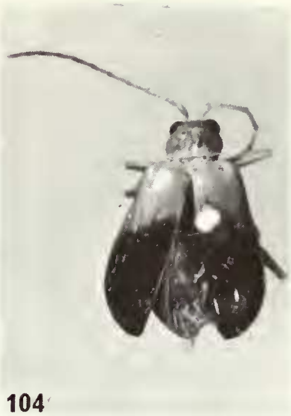
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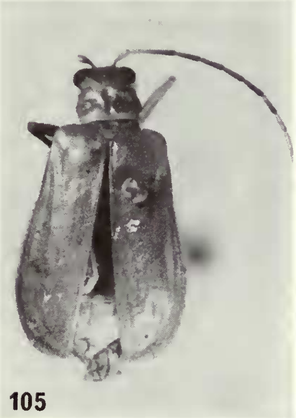
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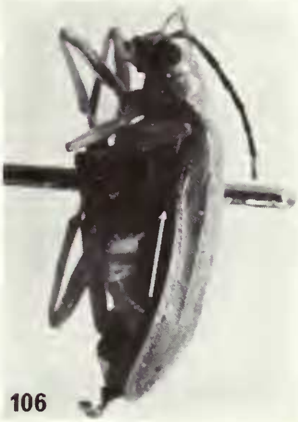
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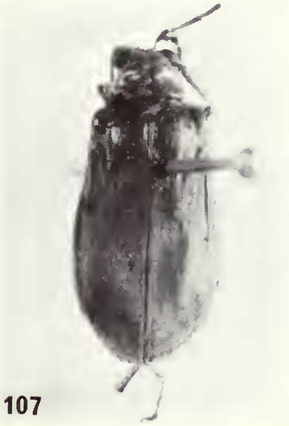
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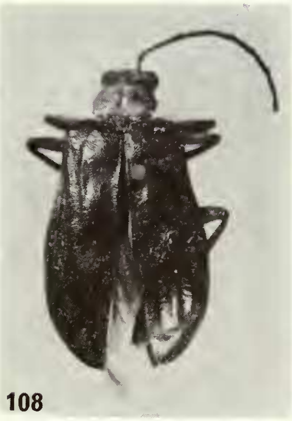
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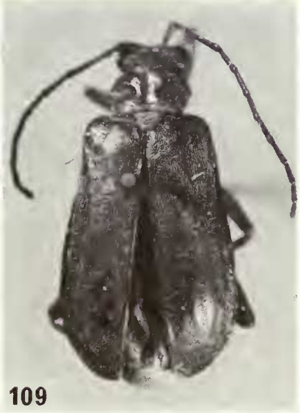
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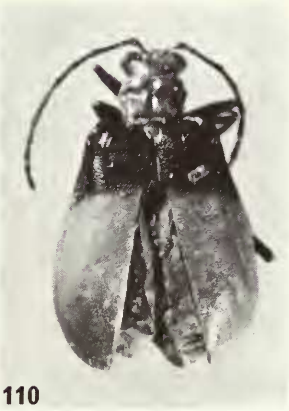
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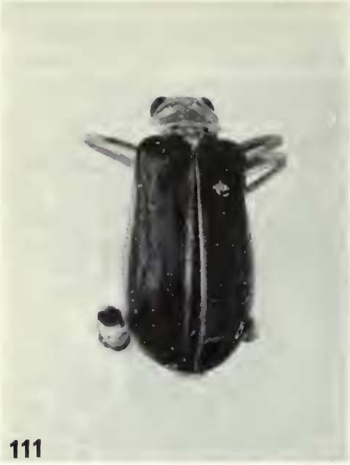
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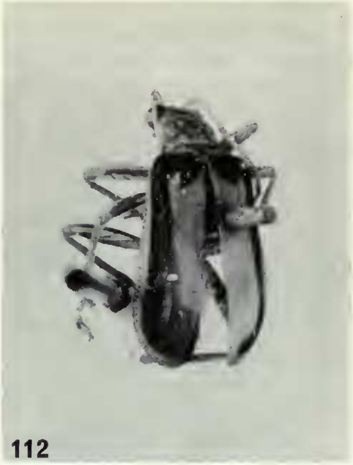
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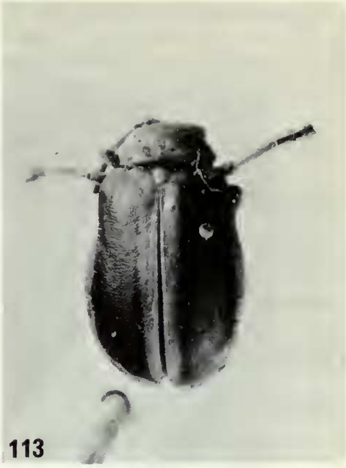
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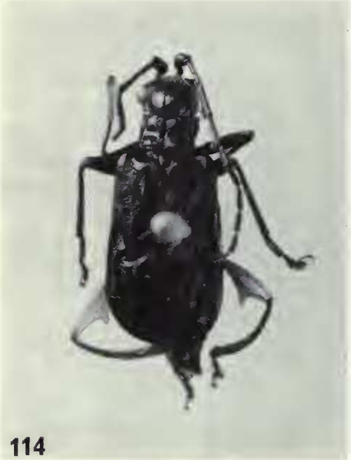
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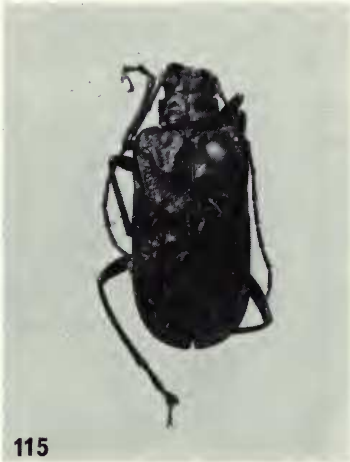
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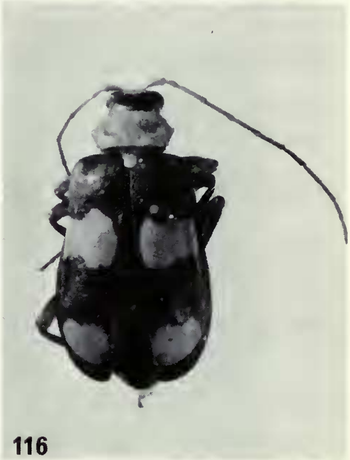
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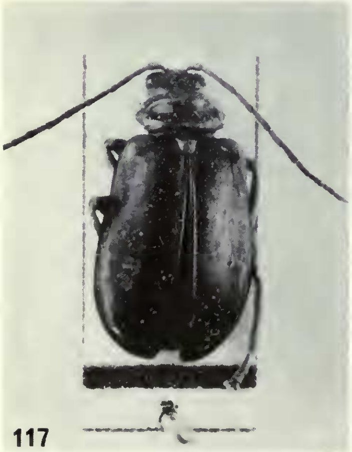
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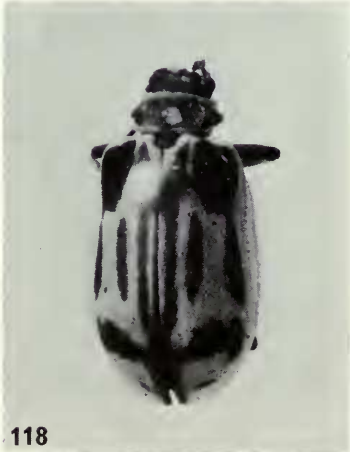
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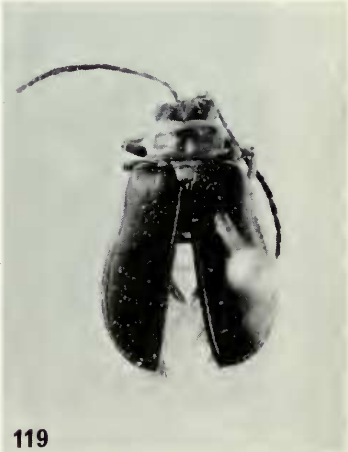
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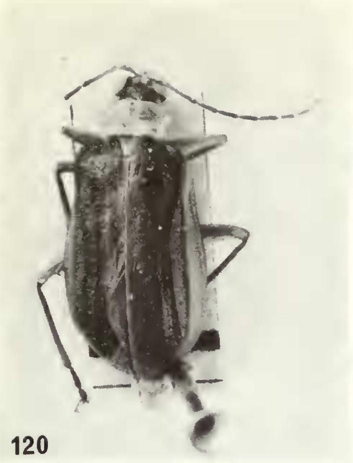
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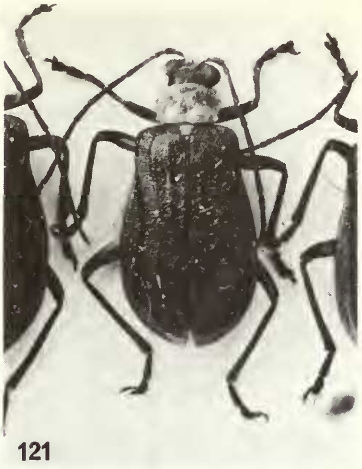
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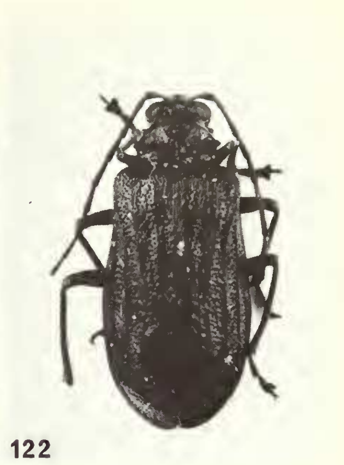
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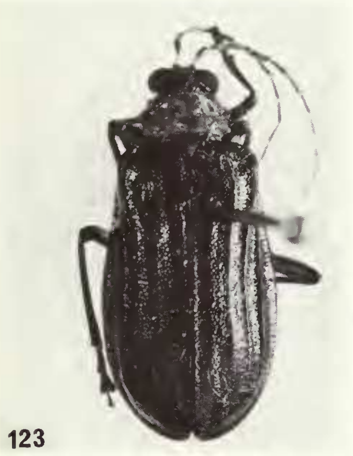
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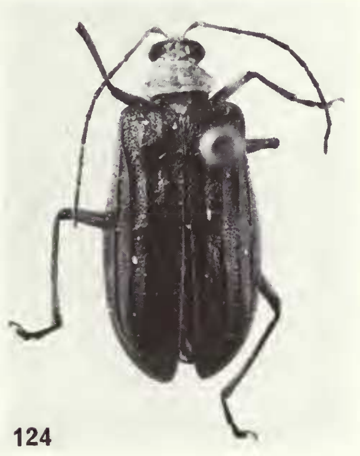
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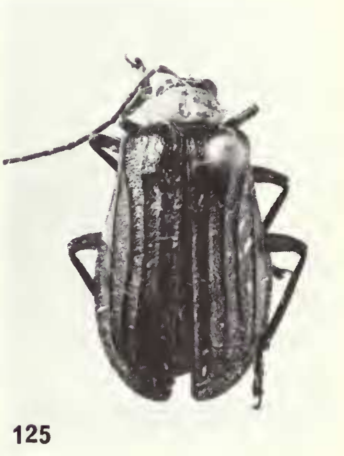
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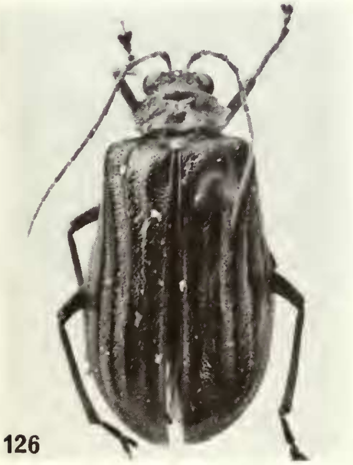
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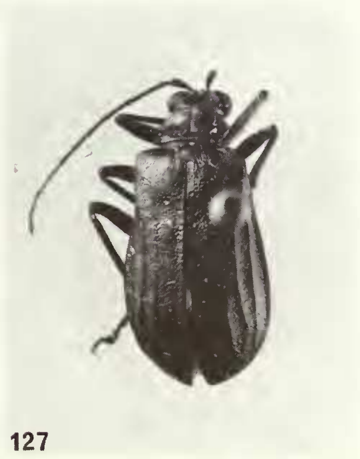
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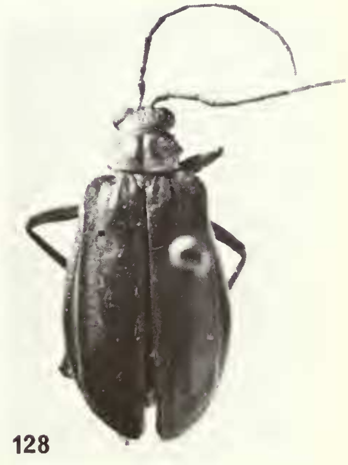
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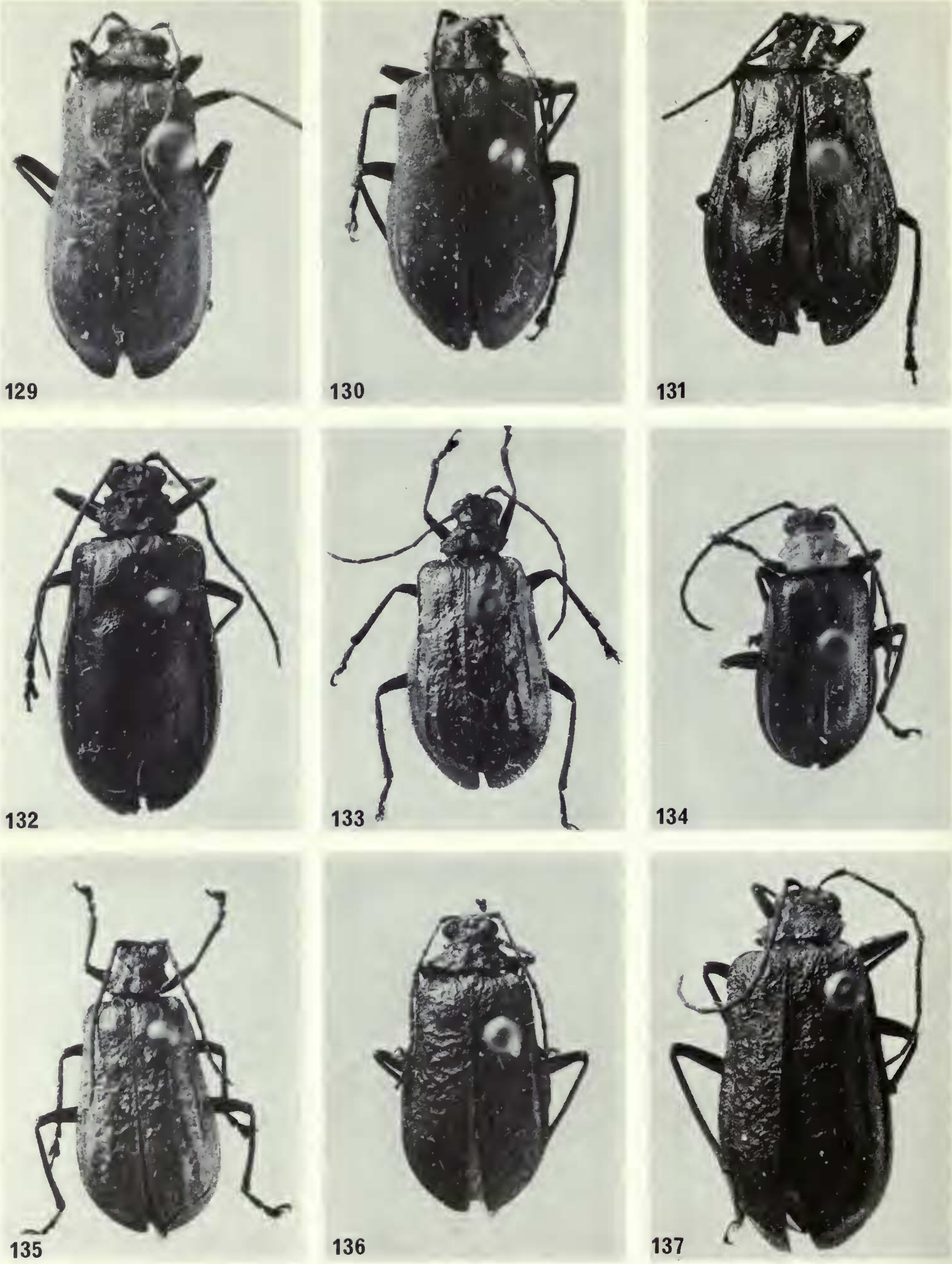

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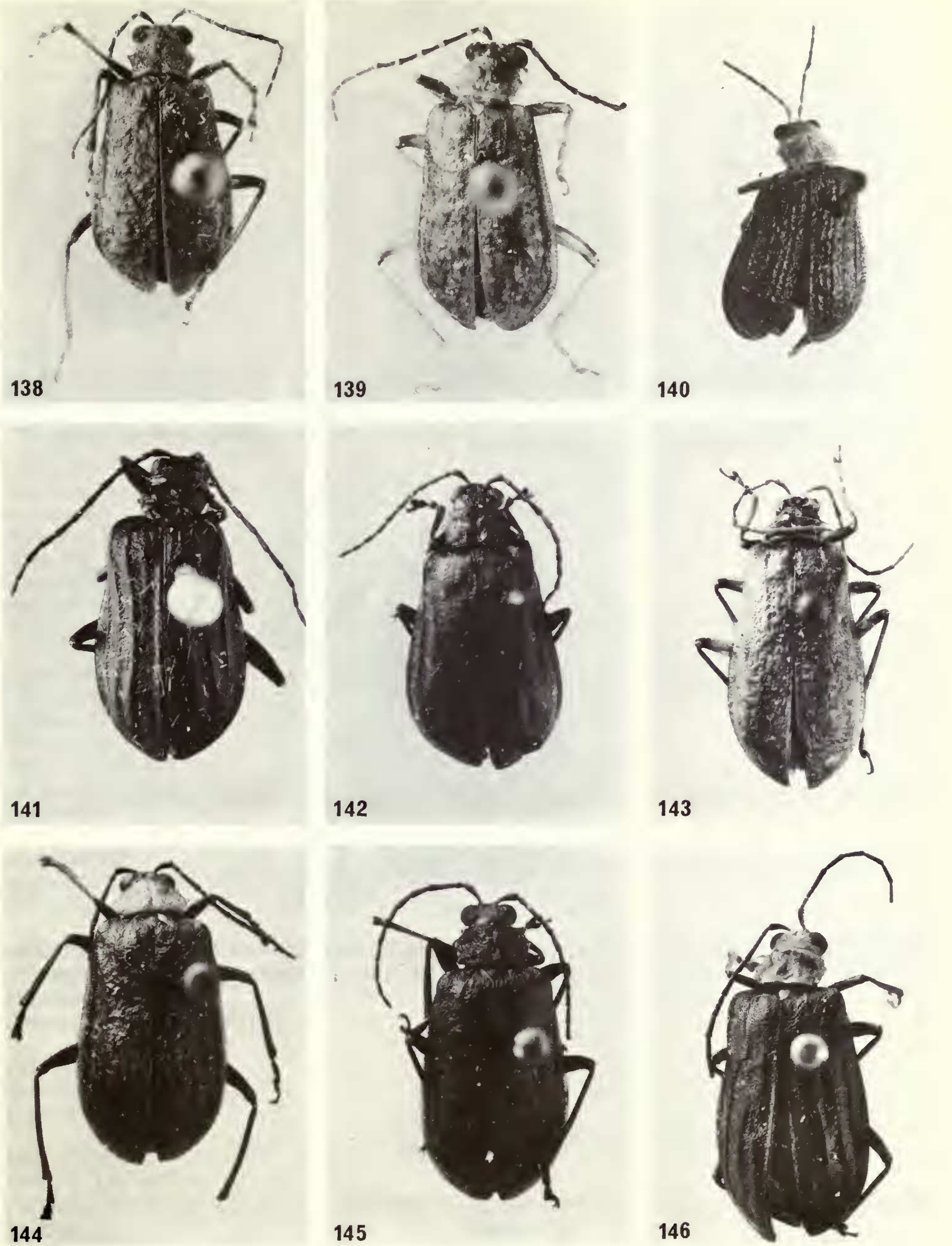

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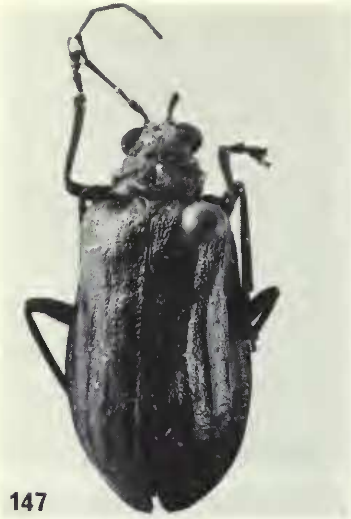
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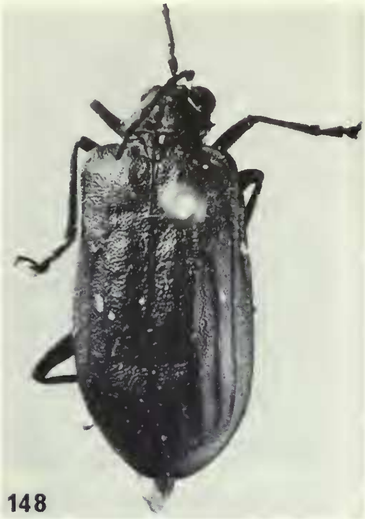
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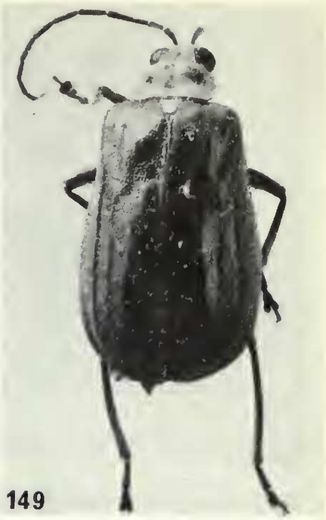
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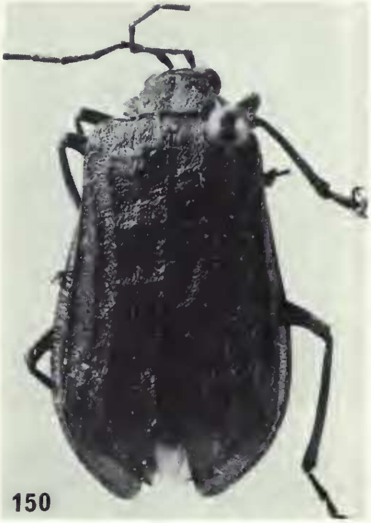
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